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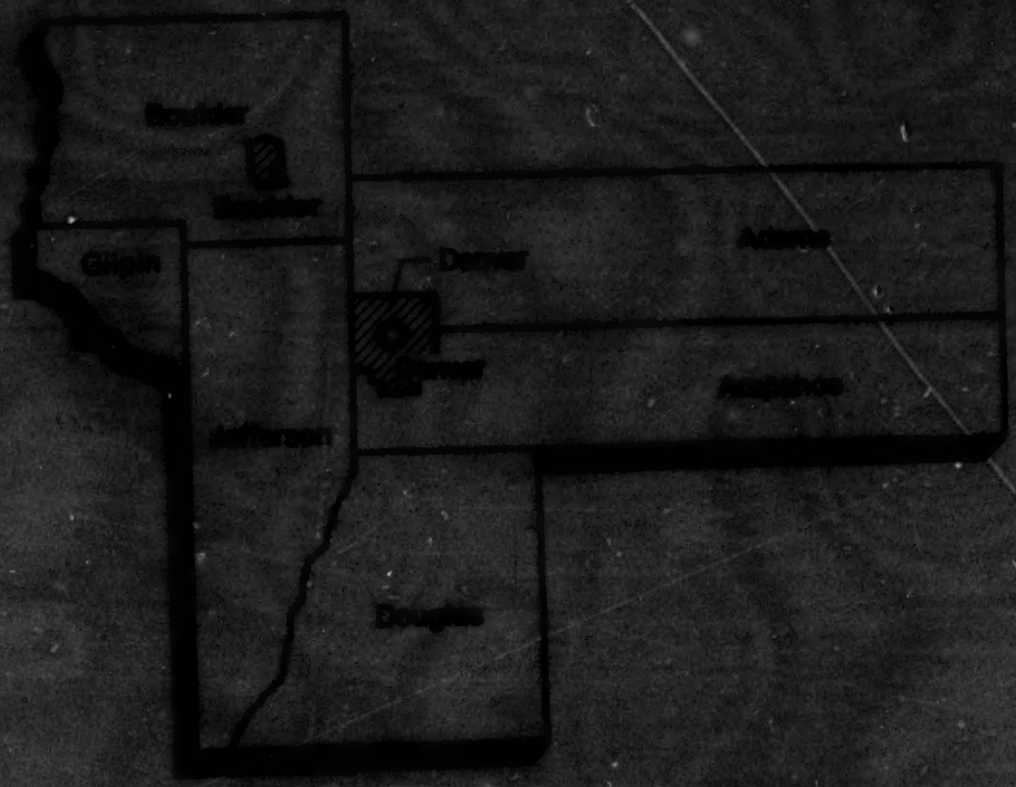
Area Wage Survey

Denver-Boulder, Colorado, Metropolitan Area December 1991

U.S. Department of Labor
Bulletin 3010-67



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Preface

This bulletin provides results of a December 1981 survey of occupational earnings in the Denver-Boulder, Colo., Standard Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' annual area wage survey program. It was conducted by the Bureau's regional office in Kansas City, Mo., under the general direction of Edward Chaffee, Assistant Regional Commissioner for Operations. The survey could not have been accomplished without the cooperation of the many firms whose wage and salary data provided the basis for the statistical information in this bulletin. The Bureau wishes to express sincere appreciation for the cooperation received.

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Note:

Reports on occupational earnings and supplementary wage provisions in the Denver-Boulder area are available for the department stores (June 1981), contract cleaning services (July 1981), nursing and personal care facilities (May 1981), and machinery (January 1981) industries. A report on occupational earnings only is available for the laundry and dry cleaning industry (December 1981). Also available are listings of union wage rates for building trades, printing trades, local-transit operating employers, local truckdrivers and helpers, and grocery store employers. A report on occupational earnings and supplementary wage provisions for municipal government workers is available for the city of Denver. Free copies of these are available from the Bureau's regional offices. (See back cover for addresses.)

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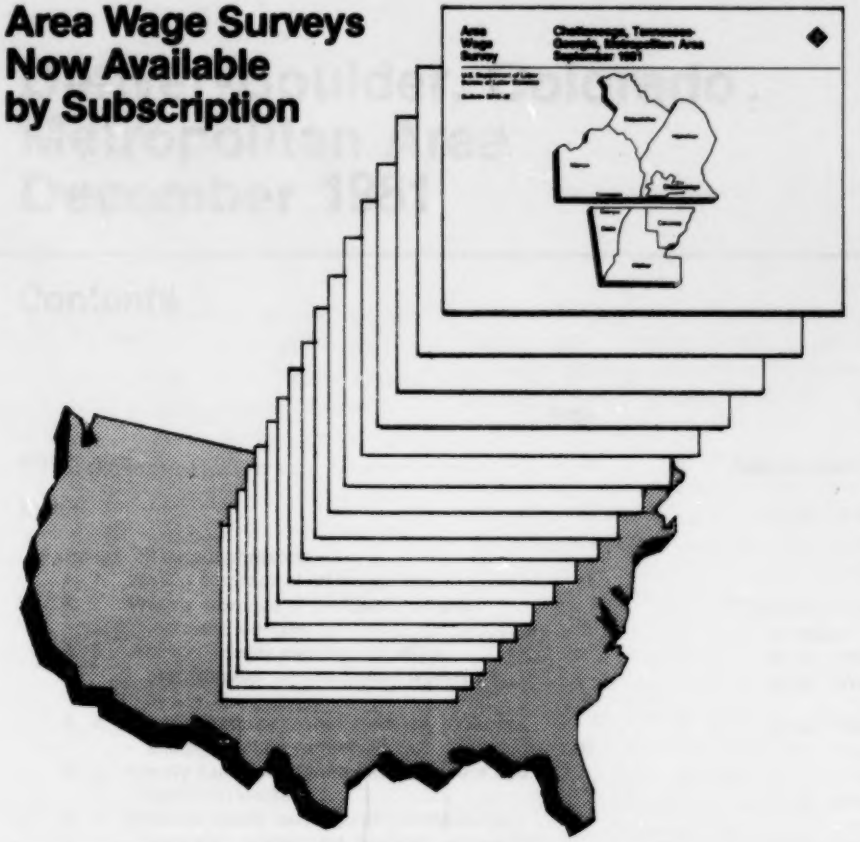

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Area Wage Survey

Denver-Boulder, Colorado, Metropolitan Area December 1981

U.S. Department of Labor
Raymond J. Donovan, Secretary

Bureau of Labor Statistics
Janet L. Norwood,
Commissioner

February 1982

Bulletin 3010-67

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Introduction

This area is 1 of 71 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits. (See list of areas on inside back cover.) In each area, earnings data for selected occupations (A-series tables) are collected annually. Information on establishment practices and supplementary wage benefits (B-series tables) is obtained every third year. This report has no B-series tables.

Each year after all individual area wage surveys have been completed, two summary reports are issued. The first brings together data for each metropolitan area surveyed; the second presents national and regional estimates, projected from individual metropolitan area data, for all Standard Metropolitan Statistical Areas in the United States, excluding Alaska and Hawaii.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

A-series tables

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. Where possible, occupations with related duties (e.g. accounting clerks and payroll clerks) are clustered to facilitate comparison. The occupations are defined in appendix B. For the 31 largest survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Beginning in 1981, multilevel jobs are designated numerically instead of alphabetically. A job conversion list is provided in appendix C.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of pay relationships in establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

Appendix C is an alphabetic to numeric conversion list for all multilevel jobs in the survey.

Table A-1. Weekly earnings of office workers in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	130 and under 140	140 – 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200	200 – 210	210 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 400	400 – 440	440 – 480	480 – 520	520 and over
Secretaries	3,481	39.5	300.00	293.50	250.00– 345.00	–	–	1	–	5	20	72	88	100	344	481	426	322	384	262	369	355	146	59	32	15
Manufacturing	1,547	40.0	301.50	291.00	253.00– 340.50	–	–	–	–	–	7	4	15	55	142	248	200	167	187	131	111	145	90	28	14	3
Nonmanufacturing	1,934	39.5	299.00	297.00	247.50– 350.50	–	–	1	–	5	13	68	73	45	202	233	226	155	197	131	258	210	56	31	18	12
Transportation and utilities	448	39.5	350.00	344.50	311.00– 386.00	–	–	–	–	–	–	–	–	8	23	24	16	24	29	58	75	107	39	24	9	12
Secretaries I	194	40.0	243.50	230.00	219.50– 249.50	–	–	–	–	–	7	–	8	36	69	37	6	21	4	1	4	2	1	–	–	–
Nonmanufacturing	117	40.0	254.50	240.00	229.00– 276.00	–	–	–	–	–	–	–	1	8	48	29	2	19	3	–	4	2	1	–	–	–
Secretaries II	830	39.5	272.00	253.50	230.00– 311.00	–	–	–	–	5	11	55	29	48	131	155	94	46	63	32	110	38	8	5	–	–
Manufacturing	288	40.0	268.00	253.00	245.00– 300.00	–	–	–	–	–	–	3	6	20	36	99	38	13	39	16	7	5	6	–	–	–
Nonmanufacturing	542	39.0	274.00	260.00	221.00– 353.00	–	–	–	–	5	11	52	23	28	95	56	56	33	24	16	103	33	2	5	–	–
Transportation and utilities	79	39.0	317.50	311.00	267.50– 364.50	–	–	–	–	–	–	–	–	–	7	10	4	5	16	4	1	30	2	–	–	–
Secretaries III	1,278	39.5	303.50	294.50	259.50– 345.00	–	–	1	–	–	2	7	51	10	86	164	185	165	113	138	112	184	35	15	6	4
Manufacturing	733	40.0	298.50	290.00	259.00– 334.00	–	–	–	–	–	–	1	4	7	57	120	113	114	80	68	62	86	18	3	–	–
Nonmanufacturing	545	39.5	310.50	308.50	263.00– 361.00	–	–	1	–	–	2	6	47	3	29	44	72	51	33	70	50	98	17	12	6	4
Transportation and utilities	211	40.0	349.50	342.00	320.50– 386.50	–	–	–	–	–	–	–	–	–	4	10	10	16	10	52	30	47	15	12	1	4
Secretaries IV	956	39.5	322.00	307.00	272.50– 360.50	–	–	–	–	–	–	10	2	6	45	114	110	77	166	68	106	118	84	27	17	6
Manufacturing	376	40.0	336.00	328.50	285.00– 394.00	–	–	–	–	–	–	–	–	–	19	21	45	37	43	42	39	45	58	20	5	2
Nonmanufacturing	580	39.5	312.00	300.00	264.50– 349.00	–	–	–	–	–	–	10	2	6	26	93	65	40	123	26	67	73	26	7	12	4
Transportation and utilities	107	39.5	390.50	374.50	342.00– 406.00	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	35	30	22	5	8	4
Secretaries V	198	40.0	345.00	335.00	299.00– 386.50	–	–	–	–	–	–	–	–	–	9	9	25	9	38	22	29	13	18	12	9	5
Manufacturing	73	40.0	357.50	338.00	303.50– 405.00	–	–	–	–	–	–	–	–	–	9	–	–	1	24	4	3	9	8	5	9	1
Nonmanufacturing	125	39.5	338.00	334.00	276.00– 355.00	–	–	–	–	–	–	–	–	–	–	9	25	8	14	18	26	4	10	7	–	4
Stenographers	265	39.5	291.00	276.00	240.00– 339.00	–	–	–	–	5	9	–	2	3	43	30	49	22	15	25	18	37	6	1	–	–
Manufacturing	142	39.5	282.00	272.50	240.00– 335.00	–	–	–	–	–	–	–	–	–	35	24	34	–	9	20	10	10	–	–	–	–
Nonmanufacturing	123	40.0	301.50	289.00	252.50– 376.50	–	–	–	–	5	9	–	2	3	8	6	15	22	6	5	8	27	6	1	–	–
Transportation and utilities	87	39.5	324.50	338.50	280.00– 385.00	–	–	–	–	–	9	–	–	–	3	–	7	16	6	4	8	27	6	1	–	–
Stenographers I	137	40.0	270.00	272.50	240.00– 285.00	–	–	–	–	–	9	–	2	3	13	26	45	15	7	4	5	8	–	–	–	–
Nonmanufacturing	67	40.0	280.00	281.00	228.50– 319.00	–	–	–	–	–	9	–	2	3	4	2	11	15	6	4	5	6	–	–	–	–
Transportation and utilities	49	40.0	290.00	289.00	265.00– 338.50	–	–	–	–	–	9	–	–	–	2	–	7	10	6	4	5	6	–	–	–	–
Stenographers II	128	39.5	313.00	337.00	239.00– 377.50	–	–	–	–	5	–	–	–	–	30	4	4	7	8	21	13	29	6	1	–	–
Manufacturing	72	39.0	302.50	333.00	237.00– 339.50	–	–	–	–	–	–	–	–	–	26	–	–	–	8	20	10	8	–	–	–	–
Nonmanufacturing	56	40.0	326.50	363.00	269.00– 392.50	–	–	–	–	5	–	–	–	–	4	4	4	7	–	1	3	21	6	1	–	–
Transportation and utilities	38	39.5	369.00	385.00	360.50– 393.50	–	–	–	–	–	–	–	–	–	1	–	–	6	–	–	3	21	6	1	–	–
Transcribing-machine typists	148	39.0	239.50	234.50	218.00– 265.00	–	–	–	–	–	2	23	10	13	31	26	35	4	–	–	4	–	–	–	–	–
Nonmanufacturing	128	39.0	239.00	238.50	218.50– 265.00	–	–	–	–	–	2	15	10	12	25	26	34	4	–	–	–	–	–	–	–	–
Typists	864	39.5	222.00	210.50	182.00– 243.00	–	–	–	82	124	63	73	90	84	125	77	68	30	27	8	7	–	15	6	5	–
Manufacturing	214	40.0	230.50	220.00	206.00– 253.00	–	–	–	–	10	9	19	43	27	40	21	15	8	19	3	–	–	–	–	–	–
Nonmanufacturing	650	39.5	219.50	203.00	172.50– 242.00	–	–	–	82	114	54	54	47	37	85	56	53	22	8	5	7	–	15	6	5	–
Transportation and utilities	165	39.5	276.00	243.00	220.00– 292.50	–	–	–	–	–	–	–	11	6	52	26	20	18	3	1	2	–	15	6	5	–
Typists I	490	39.5	196.00	196.00	172.50– 219.50	–	–	–	82	88	62	55	56	27	92	15	10	3	–	–	–	–	–	–	–	–
Manufacturing	102	39.5	213.50	206.00	195.50– 220.00	–	–	–	–	10	8	19	25	1	20	8	8	3	–	–	–	–	–	–	–	–
Nonmanufacturing	388	39.5	191.00	184.00	172.50– 216.50	–	–	–	82	78	54	36	31	26	72	7	2	–	–	–	–	–	–	–	–	–
Transportation and utilities	75	39.5	221.00	220.00	220.00– 225.50	–	–	–	–	–	–	–	11	6	52	8	–	–	–	–	–	–	–	–	–	–
Typists II	374	39.5	256.50	246.50	213.00– 281.00	–	–	–	–	36	1	18	34	37	33	62	58	27	27	8	7	–	15	6	5	–
Manufacturing	112	40.0	245.50	229.50	214.00– 271.00	–	–	–	–	–	1	–	18	28	20	13	7	5	19	3	–	–	–	–	–	–
Nonmanufacturing	262	39.0	261.00	251.50	203.00– 281.00	–	–	–	–	36	–	18	16	11	13	49	51	22	8	5	7	–	15	6	5	–
Transportation and utilities	90	39.5	322.00	289.50	264.00– 404.00	–	–	–	–	–	–	–	–	–	–	20	20	18	3	1	2	–	15	6	5	–

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																					
			Mean[3]	Median[3]	Middle range[3]	130 and under 140	140 – 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200	200 – 210	210 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 400	400 – 440	440 – 480	480 – 520	520 and over
File clerks	783	39.0	179.50	174.50	151.50– 192.00	50	138	72	126	150	42	67	27	21	36	13	8	6	–	17	1	7	–	1	1	–
Nonmanufacturing	760	39.0	179.50	168.50	151.00– 192.00	50	138	72	122	143	36	65	25	21	36	13	8	4	–	17	1	7	–	1	1	–
Transportation and utilities	34	39.5	265.00	221.00	186.00– 306.50	–	–	–	–	–	10	–	–	3	6	–	6	–	–	1	–	6	–	1	1	–
File clerks I	324	39.5	158.50	155.50	144.50– 165.00	22	91	62	112	5	14	7	2	1	8	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	319	39.5	158.00	153.50	144.50– 162.00	22	91	62	112	4	14	5	–	1	8	–	–	–	–	–	–	–	–	–	–	–
File clerks II	386	39.0	185.00	176.50	169.00– 194.00	28	47	8	14	139	22	58	12	19	11	7	6	2	–	9	–	4	–	–	–	–
Nonmanufacturing	368	38.5	185.00	176.50	166.00– 194.00	28	47	8	10	133	16	58	12	19	11	7	6	–	–	9	–	4	–	–	–	–
File clerks III	73	39.0	244.50	224.50	203.50– 275.50	–	–	2	–	6	6	2	13	1	17	6	2	4	–	8	1	3	–	1	1	–
Nonmanufacturing	73	39.0	244.50	224.50	203.50– 275.50	–	–	2	–	6	6	2	13	1	17	6	2	4	–	8	1	3	–	1	1	–
Messengers	188	39.5	190.50	183.00	162.50– 209.50	–	26	11	29	9	29	4	39	22	12	2	1	–	–	–	–	4	–	–	–	–
Nonmanufacturing	164	39.5	190.00	182.00	161.00– 209.50	–	26	11	22	6	29	1	32	22	8	2	1	–	–	–	–	4	–	–	–	–
Transportation and utilities	34	39.5	221.00	210.50	180.50– 211.50	–	–	–	–	–	15	–	1	10	1	2	1	–	–	–	–	4	–	–	–	–
Switchboard operators	344	40.0	203.00	184.00	160.00– 225.50	–	35	18	69	41	26	9	31	11	29	15	24	15	3	3	8	7	–	–	–	–
Nonmanufacturing	300	39.5	193.50	176.00	160.00– 208.50	–	35	18	69	40	26	7	30	3	29	12	13	5	1	1	4	7	–	–	–	–
Transportation and utilities	25	40.0	302.50	281.00	240.00– 368.50	–	–	–	–	–	–	–	–	–	–	8	2	3	1	1	3	7	–	–	–	–
Switchboard operator-receptionists	675	40.0	213.00	201.00	178.50– 226.00	–	3	11	38	125	73	53	90	74	115	23	16	16	12	–	10	1	1	5	9	–
Manufacturing	99	40.0	225.00	224.50	203.00– 226.00	–	–	–	–	9	3	–	14	16	44	2	2	1	6	–	2	–	–	–	–	–
Nonmanufacturing	576	40.0	211.00	196.00	178.50– 226.50	–	3	11	38	116	70	53	76	58	71	21	14	15	6	–	8	1	1	5	9	–
Transportation and utilities	41	39.5	302.50	261.50	215.00– 397.50	–	–	–	–	–	4	–	–	11	3	–	6	–	6	–	–	1	1	–	9	–
Order clerks	847	40.0	225.50	210.00	184.50– 262.00	–	1	17	47	7	237	2	91	62	21	99	210	5	28	6	12	2	–	–	–	–
Manufacturing	135	39.5	233.50	235.00	167.00– 266.50	–	–	16	20	–	10	–	–	9	13	19	28	3	5	6	6	2	–	–	–	–
Nonmanufacturing	712	40.0	224.00	208.50	184.50– 261.50	–	1	1	27	7	227	2	91	53	8	80	184	2	23	–	6	–	–	–	–	–
Order clerks I	796	40.0	221.00	207.00	184.50– 261.50	–	1	17	47	7	237	2	91	58	8	97	206	2	23	–	–	–	–	–	–	–
Manufacturing	90	39.0	208.50	185.00	161.00– 254.00	–	–	16	20	–	10	–	–	5	–	17	22	–	–	–	–	–	–	–	–	–
Nonmanufacturing	706	40.0	223.00	207.00	184.50– 261.50	–	1	1	27	7	227	2	91	53	8	80	184	2	23	–	–	–	–	–	–	–
Order clerks II	51	39.5	291.50	296.00	224.50– 351.00	–	–	–	–	–	–	–	–	4	13	2	4	3	5	6	12	2	–	–	–	–
Accounting clerks	3,867	40.0	244.50	230.00	201.00– 276.00	–	8	5	124	170	321	312	440	242	678	403	264	268	137	93	128	162	74	22	16	–
Manufacturing	848	40.0	257.50	245.50	212.50– 290.00	–	–	–	11	20	36	62	79	54	141	98	94	61	78	28	26	31	15	13	1	–
Nonmanufacturing	3,019	40.0	241.00	228.00	197.50– 264.50	–	8	5	113	150	285	250	361	188	537	305	170	207	59	65	102	131	59	9	15	–
Transportation and utilities	401	40.0	327.00	334.00	275.00– 391.00	–	–	–	–	–	8	16	16	8	28	8	34	50	13	35	35	67	59	9	15	–
Accounting clerks I	299	40.0	193.50	190.00	175.00– 207.00	–	–	–	49	35	51	60	42	36	3	22	–	1	–	–	–	–	–	–	–	–
Nonmanufacturing	214	40.0	191.50	189.00	170.00– 207.00	–	–	–	49	35	23	44	10	27	3	22	–	1	–	–	–	–	–	–	–	–
Accounting clerks II	1,309	40.0	222.50	214.00	190.00– 244.50	–	8	5	74	86	130	143	173	51	256	134	103	61	31	26	26	2	–	–	–	–
Manufacturing	194	40.0	246.50	243.50	217.00– 277.00	–	–	–	10	2	2	24	3	8	45	30	30	12	16	2	8	2	–	–	–	–
Nonmanufacturing	1,115	40.0	218.50	208.00	189.00– 240.00	–	8	5	64	84	128	119	170	43	211	104	73	49	15	24	18	–	–	–	–	–
Transportation and utilities	123	40.0	247.00	230.00	207.50– 286.00	–	–	–	–	–	8	16	16	8	28	–	10	11	6	20	–	–	–	–	–	–
Accounting clerks III	1,453	39.5	243.00	230.00	207.00– 272.50	–	–	–	1	44	135	106	189	110	313	130	90	137	41	31	61	56	9	–	–	–
Manufacturing	241	39.5	262.00	253.00	209.50– 306.00	–	–	–	1	18	6	19	18	13	30	27	16	28	14	18	14	13	6	–	–	–
Nonmanufacturing	1,212	39.5	239.50	230.00	207.00– 262.50	–	–	–	–	26	129	87	171	97	283	103	74	109	27	13	47	43	3	–	–	–
Accounting clerks IV	783	39.5	297.50	282.00	237.50– 351.00	–	–	–	–	5	5	3	36	45	106	117	71	69	65	36	41	104	55	14	11	–
Manufacturing	328	39.5	276.50	265.00	225.00– 305.00	–	–	–	–	–	–	3	26	24	66	41	48	21	48	8	4	16	9	13	1	–
Nonmanufacturing	455	39.5	312.50	299.50	246.00– 377.50	–	–	–	–	5	5	–	10	21	40	76	23	48	17	28	37	88	46	1	10	–
Transportation and utilities	116	39.5	389.50	398.50	359.50– 421.50	–	–	–	–	–	–	–	–	–	–	6	–	8	1	2	12	30	46	1	10	–

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[3]	Middle range[4]	130 and under 140	140 – 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200	200 – 210	210 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 400	400 – 440	440 – 480	480 – 520	520 and over
Payroll clerks	438	39.5	253.50	241.50	209.50– 282.00	–	16	–	1	–	25	12	73	21	58	71	34	50	17	15	20	11	6	–	8	–
Manufacturing	155	40.0	272.50	278.50	241.00– 291.00	–	–	–	–	–	–	5	11	5	14	28	18	41	13	7	9	6	–	–	–	–
Nonmanufacturing	283	39.5	243.00	228.00	204.00– 258.00	–	16	–	1	–	25	7	62	16	44	43	18	9	4	8	11	5	6	–	8	–
Transportation and utilities	46	40.0	330.50	334.00	222.00– 406.50	–	–	–	–	–	6	–	–	–	6	–	2	–	–	6	3	5	6	–	6	–
Key entry operators	1,970	39.5	236.50	230.00	202.50– 257.00	–	5	17	20	55	144	185	183	201	455	242	158	119	88	22	17	26	9	15	7	–
Manufacturing	536	40.0	244.50	242.00	215.50– 269.50	–	–	–	–	13	32	12	53	39	108	117	60	51	29	16	4	2	–	–	–	–
Nonmanufacturing	1,434	39.5	234.00	228.00	199.50– 254.50	–	5	17	20	42	112	173	130	162	347	125	98	68	59	6	13	26	9	15	7	–
Transportation and utilities	166	39.5	298.50	283.50	242.50– 358.50	–	–	–	–	–	–	6	6	8	21	20	19	10	25	6	3	26	9	–	7	–
Key entry operators I	1,189	39.5	222.00	219.00	200.00– 234.50	–	5	17	20	35	64	145	155	188	317	97	82	23	16	10	9	6	–	–	–	–
Manufacturing	283	39.5	227.50	224.50	202.50– 253.00	–	–	–	–	13	32	9	47	32	51	56	26	12	1	4	–	–	–	–	–	–
Nonmanufacturing	906	39.5	220.50	219.00	199.50– 230.50	–	5	17	20	22	32	136	108	156	266	41	56	11	15	6	9	6	–	–	–	–
Transportation and utilities	112	40.0	262.00	261.00	220.00– 303.00	–	–	–	–	–	–	6	6	8	21	14	18	10	15	6	2	6	–	–	–	–
Key entry operators II	781	40.0	259.00	252.00	220.50– 285.00	–	–	–	–	20	80	40	28	13	138	145	76	96	72	12	8	22	9	15	7	–
Manufacturing	253	40.0	264.00	255.50	237.00– 289.00	–	–	–	–	–	–	3	6	7	57	61	34	39	28	12	4	2	–	–	–	–
Nonmanufacturing	528	39.5	256.50	249.00	195.50– 285.00	–	–	–	–	20	80	37	22	6	81	84	42	57	44	–	4	20	9	15	7	–
Transportation and utilities	54	39.0	373.50	388.00	305.00– 428.00	–	–	–	–	–	–	–	–	–	–	6	1	–	10	–	1	20	9	–	7	–

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	180 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 and over
Computer systems analysts (business)	926	39.5	529.00	529.00	461.00– 595.00	–	–	–	–	–	2	11	9	13	10	39	67	125	146	179	121	103	51	23	16	11
Manufacturing	265	40.0	499.50	503.00	432.00– 575.50	–	–	–	–	–	–	5	7	12	10	12	28	43	26	49	32	26	7	3	4	1
Nonmanufacturing	661	39.5	540.50	535.50	480.00– 599.00	–	–	–	–	–	2	6	2	1	–	27	39	82	120	130	89	77	44	20	12	10
Transportation and utilities	453	39.0	556.00	547.00	507.00– 610.50	–	–	–	–	–	–	–	–	–	–	3	19	54	77	98	70	70	37	15	10	–
Computer systems analysts (business) I	106	40.0	421.00	419.00	344.50– 485.00	–	–	–	–	–	2	11	7	12	9	5	20	8	12	16	4	–	–	–	–	–
Manufacturing	54	40.0	374.50	365.00	344.00– 419.50	–	–	–	–	–	–	5	7	12	9	3	14	4	–	–	–	–	–	–	–	–
Computer systems analysts (business) II	434	39.5	494.00	499.50	453.50– 535.50	–	–	–	–	–	–	–	2	1	1	30	30	106	108	115	34	4	5	–	–	–
Manufacturing	102	40.0	471.00	465.50	441.50– 506.00	–	–	–	–	–	–	–	–	–	1	9	12	37	20	22	1	–	–	–	–	–
Nonmanufacturing	332	39.5	501.00	509.00	461.00– 540.50	–	–	–	–	–	–	–	2	1	–	21	18	69	86	93	33	4	5	–	–	–
Transportation and utilities	225	39.0	510.00	516.50	476.50– 539.50	–	–	–	–	–	–	–	–	–	–	–	13	50	63	73	23	3	–	–	–	–
Computer systems analysts (business) III	386	39.5	597.50	601.50	549.50– 639.50	–	–	–	–	–	–	–	–	–	–	4	17	11	28	48	83	99	46	23	16	11
Manufacturing	109	40.0	587.50	587.00	545.00– 621.50	–	–	–	–	–	–	–	–	–	–	–	2	2	6	27	31	26	7	3	4	1
Nonmanufacturing	277	39.5	601.50	609.00	558.00– 653.00	–	–	–	–	–	–	–	–	–	–	4	15	9	22	21	52	73	39	20	12	10
Transportation and utilities	188	39.0	624.50	619.50	595.00– 659.00	–	–	–	–	–	–	–	–	–	–	1	–	–	2	12	44	67	37	15	10	–
Computer programmers (business)	852	39.5	427.50	429.50	348.50– 489.00	–	–	–	18	23	13	61	54	78	24	88	104	140	118	54	53	5	1	18	–	–
Manufacturing	260	40.0	431.50	440.00	354.50– 501.50	–	–	–	8	7	7	7	15	27	7	26	25	41	33	39	15	2	1	–	–	–
Nonmanufacturing	592	39.5	426.00	423.00	346.00– 483.00	–	–	–	10	16	6	54	39	51	17	62	79	99	85	15	38	3	–	18	–	–
Computer programmers (business) I	105	39.5	304.50	300.00	276.00– 329.00	–	–	–	18	14	13	20	18	12	2	8	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	57	39.0	306.50	300.00	276.00– 329.00	–	–	–	10	7	6	14	7	3	2	8	–	–	–	–	–	–	–	–	–	–
Computer programmers (business) II	439	39.5	406.00	401.50	348.00– 466.50	–	–	–	–	9	–	41	36	56	22	55	57	92	62	9	–	–	–	–	–	–
Manufacturing	97	40.0	402.00	395.50	365.00– 435.00	–	–	–	–	–	–	1	4	18	7	24	19	17	6	1	–	–	–	–	–	–
Nonmanufacturing	342	39.5	407.50	407.00	341.50– 470.50	–	–	–	–	9	–	40	32	38	15	31	38	75	56	8	–	–	–	–	–	–
Computer programmers (business) III	308	39.5	500.00	492.50	436.00– 557.50	–	–	–	–	–	–	–	–	10	–	25	47	48	56	45	53	5	1	18	–	–
Manufacturing	115	40.0	510.00	514.00	470.00– 538.00	–	–	–	–	–	–	–	–	–	–	2	6	24	27	38	15	2	1	–	–	–
Nonmanufacturing	193	39.0	494.50	476.00	403.00– 577.00	–	–	–	–	–	–	–	–	10	–	23	41	24	29	7	38	3	–	18	–	–
Computer operators	989	39.5	339.50	326.00	261.50– 416.50	26	49	90	69	90	96	65	62	47	43	81	113	28	110	20	–	–	–	–	–	–
Manufacturing	208	40.0	327.00	326.50	282.50– 379.00	8	13	2	3	25	17	29	21	22	16	29	17	–	6	–	–	–	–	–	–	–
Nonmanufacturing	781	39.5	342.50	321.00	258.00– 419.50	18	36	88	66	65	79	36	41	25	27	52	96	28	104	20	–	–	–	–	–	–
Computer operators I	187	39.5	237.00	230.00	211.50– 258.00	22	36	61	24	24	9	9	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	141	39.0	235.00	230.00	218.50– 247.00	14	23	60	23	8	4	8	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Computer operators II	494	39.5	330.00	321.00	271.50– 390.50	4	13	29	45	59	47	47	43	29	15	60	86	14	2	1	–	–	–	–	–	–
Manufacturing	94	39.5	329.00	318.50	307.50– 363.50	–	–	1	2	9	10	27	11	10	3	21	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	400	39.5	330.00	329.00	268.50– 410.50	4	13	28	43	50	37	20	32	19	12	39	86	14	2	1	–	–	–	–	–	–
Computer operators III	308	40.0	417.00	415.50	348.00– 495.00	–	–	–	–	7	40	9	18	17	28	21	27	14	108	19	–	–	–	–	–	–
Manufacturing	68	40.0	381.50	367.50	350.50– 403.50	–	–	–	–	–	2	1	9	12	13	8	17	–	6	–	–	–	–	–	–	–
Nonmanufacturing	240	39.5	427.00	494.50	333.50– 495.00	–	–	–	–	7	38	8	9	5	15	13	10	14	102	19	–	–	–	–	–	–
Drafters	1,115	40.0	341.50	340.00	280.00– 387.00	8	15	39	68	149	65	108	101	177	96	58	111	79	25	11	5	2	–	–	–	–
Manufacturing	770	40.0	335.50	338.00	270.00– 378.00	8	10	28	62	122	21	77	66	117	76	38	65	35	20	3	2	–	–	–	–	–
Nonmanufacturing	345	39.5	355.00	342.00	295.00– 400.00	–	5	11	6	27	44	29	35	60	20	20	26	44	5	8	3	2	–	–	–	–

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Average weekly hours[2] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	180 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 and over
Drafters II	104	40.0	270.00	261.00	244.00– 298.00	1	5	14	28	23	10	3	–	20	–	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	88	40.0	270.00	261.00	244.00– 314.50	1	5	8	28	23	–	3	–	20	–	–	–	–	–	–	–	–	–	–	–	–
Drafters III	303	40.0	290.50	272.50	266.00– 317.00	–	10	5	35	112	25	48	20	25	11	7	4	1	–	–	–	–	–	–	–	–
Manufacturing	217	40.0	288.00	270.00	264.00– 315.00	–	5	–	34	91	7	34	14	20	11	1	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	86	40.0	297.00	288.50	266.50– 326.00	–	5	5	1	21	18	14	6	5	–	6	4	1	–	–	–	–	–	–	–	–
Drafters IV	312	39.5	343.00	336.00	314.50– 366.00	–	–	–	5	14	30	53	77	37	42	19	20	13	2	–	–	–	–	–	–	–
Manufacturing	196	40.0	344.00	336.00	317.00– 369.00	–	–	–	–	8	14	39	50	21	33	13	15	3	–	–	–	–	–	–	–	–
Nonmanufacturing	116	39.5	341.50	331.00	309.00– 365.00	–	–	–	5	6	16	14	27	16	9	6	5	10	2	–	–	–	–	–	–	–
Drafters V	357	40.0	411.00	406.00	358.00– 460.00	–	–	–	–	–	–	2	4	69	43	32	61	65	23	11	5	2	–	–	–	–
Manufacturing	242	40.0	407.00	412.00	361.00– 435.50	–	–	–	–	–	–	1	2	56	32	24	70	32	20	3	2	–	–	–	–	–
Nonmanufacturing	115	39.5	419.50	400.00	351.50– 470.00	–	–	–	–	–	–	1	2	33	11	8	11	33	3	8	3	2	–	–	–	–
Electronics technicians	1,806	40.0	401.50	439.50	310.50– 478.00	–	24	31	89	146	98	123	111	80	60	54	87	541	252	106	4	–	–	–	–	–
Manufacturing	1,108	40.0	366.50	345.00	294.50– 468.50	–	24	31	89	62	98	121	110	75	59	51	72	121	154	37	4	–	–	–	–	–
Nonmanufacturing	698	40.0	456.00	478.00	473.00– 478.00	–	–	–	–	84	–	2	1	5	1	3	15	420	98	69	–	–	–	–	–	–
Transportation and utilities	599	40.0	449.00	478.00	473.00– 478.00	–	–	–	–	84	–	2	1	4	–	3	15	411	14	65	–	–	–	–	–	–
Electronics technicians I	172	40.0	264.00	245.00	236.00– 270.00	–	24	24	73	9	3	9	15	4	–	5	6	–	–	–	–	–	–	–	–	–
Manufacturing	172	40.0	264.00	245.00	236.00– 270.00	–	24	24	73	9	3	9	15	4	–	5	6	–	–	–	–	–	–	–	–	–
Electronics technicians II	1,009	40.0	403.50	470.00	303.50– 478.00	–	–	7	16	137	78	56	41	17	14	29	53	500	57	4	–	–	–	–	–	–
Manufacturing	481	40.0	365.50	328.00	291.00– 470.00	–	–	7	16	53	78	54	40	13	14	27	45	82	52	–	–	–	–	–	–	–
Nonmanufacturing	528	40.0	438.50	473.00	473.00– 478.00	–	–	–	–	84	–	2	1	4	–	2	8	418	5	4	–	–	–	–	–	–
Transportation and utilities	511	40.0	437.00	473.00	473.00– 478.00	–	–	–	–	84	–	2	1	4	–	2	8	409	1	–	–	–	–	–	–	–
Electronics technicians III	625	40.0	435.50	489.50	350.00– 506.50	–	–	–	–	–	17	58	55	59	46	20	28	41	195	102	4	–	–	–	–	–
Manufacturing	455	40.0	407.00	375.00	335.00– 495.00	–	–	–	–	–	17	58	55	58	45	19	21	39	102	37	4	–	–	–	–	–
Nonmanufacturing	170	39.5	511.50	506.50	506.50– 534.50	–	–	–	–	–	–	–	–	1	1	1	7	2	93	65	–	–	–	–	–	–
Transportation and utilities	88	38.5	518.00	534.00	519.00– 536.50	–	–	–	–	–	–	–	–	–	–	1	7	2	13	65	–	–	–	–	–	–
Registered industrial nurses	78	40.0	390.00	392.50	355.50– 410.50	–	–	–	–	1	–	2	4	14	8	17	26	1	4	1	–	–	–	–	–	–
Manufacturing	61	40.0	391.00	392.50	353.50– 410.50	–	–	–	–	–	–	2	4	12	4	16	17	1	4	1	–	–	–	–	–	–

See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Denver-Boulder, Colo., December 1981

Sex,[1] occupation, and industry division	Number of workers	Average (mean)[2]	
		Weekly hours[3] (standard)	Weekly earnings (in dollars)[3]
Office occupations - men			
Messengers	81	40.0	191.50
Nonmanufacturing	63	40.0	191.00
Order clerks	380	40.0	227.50
Nonmanufacturing	371	40.0	225.00
Order clerks I	365	40.0	223.00
Nonmanufacturing	365	40.0	223.00
Accounting clerks:			
Nonmanufacturing:			
Transportation and utilities	46	40.0	354.50
Accounting clerks III:			
Nonmanufacturing	54	39.0	275.50
Accounting clerks IV:			
Nonmanufacturing	94	39.5	332.00
Key entry operators	60	40.0	227.50
Nonmanufacturing	57	40.0	227.50
Office occupations - women			
Secretaries	3,482	39.5	300.50
Manufacturing	1,547	40.0	301.50
Nonmanufacturing	1,915	39.5	299.00
Transportation and utilities	446	39.5	350.00
Secretaries I	194	40.0	243.50
Nonmanufacturing	117	40.0	254.50
Secretaries II	829	39.5	271.50
Manufacturing	288	40.0	268.00
Nonmanufacturing	541	39.0	273.50
Transportation and utilities	78	39.0	316.50
Secretaries III	1,277	39.5	303.50
Manufacturing	733	40.0	298.50
Nonmanufacturing	544	39.5	310.50
Transportation and utilities	210	40.0	350.00
Secretaries IV	956	39.5	322.00
Manufacturing	376	40.0	338.00
Nonmanufacturing	580	39.5	312.00
Transportation and utilities	107	39.5	390.50
Secretaries V	198	40.0	345.00
Manufacturing	73	40.0	357.50
Nonmanufacturing	125	39.5	338.00
Stenographers	254	39.5	286.50
Manufacturing	142	39.5	282.00
Nonmanufacturing	112	40.0	292.50
Transportation and utilities	78	39.5	315.00
Stenographers I	137	40.0	270.00
Nonmanufacturing	67	40.0	280.00
Transportation and utilities	49	40.0	290.00
Stenographers II	117	39.5	308.00
Manufacturing	72	39.0	302.50
Transcribing-machine typists	140	39.0	241.00
Nonmanufacturing	120	39.0	241.00
Typists	855	39.5	221.00
Manufacturing	212	40.0	230.50
Nonmanufacturing	643	39.5	217.50
Transportation and utilities	160	39.5	271.00
Typists I	488	39.5	196.00
Manufacturing	102	39.5	213.50
Nonmanufacturing	386	39.5	191.00
Transportation and utilities	75	39.5	221.00
Typists II	367	39.5	254.00
Manufacturing	110	40.0	248.00
Nonmanufacturing	257	39.0	257.50
Transportation and utilities	85	39.5	315.50
File clerks	773	39.0	178.50
Nonmanufacturing	750	39.0	178.00
Transportation and utilities	32	39.5	254.00
File clerks I	324	39.5	158.50
Nonmanufacturing	319	39.5	158.00
File clerks II	381	39.0	185.00
Nonmanufacturing	363	38.5	185.00
File clerks III	68	39.0	234.50
Nonmanufacturing	68	39.0	234.50
Messengers	106	39.0	189.00
Nonmanufacturing	100	39.0	189.00
Transportation and utilities	26	39.5	214.50
Switchboard operators	340	40.0	202.00
Nonmanufacturing	298	39.5	193.00
Transportation and utilities	25	40.0	302.50
Switchboard operator-receptionists	575	40.0	213.00
Manufacturing	99	40.0	225.00
Nonmanufacturing	576	40.0	211.00
Transportation and utilities	41	39.5	302.50
Order clerks	467	40.0	223.50
Manufacturing	126	39.0	227.00
Nonmanufacturing	341	40.0	222.50
Order clerks I	431	40.0	219.50
Manufacturing	90	39.0	208.50
Nonmanufacturing	341	40.0	222.50
Accounting clerks	3,451	40.0	241.50
Manufacturing	704	39.5	259.50
Nonmanufacturing	2,747	40.0	237.00
Transportation and utilities	347	39.5	321.50
Accounting clerks I	293	40.0	192.50
Nonmanufacturing	208	40.0	190.00
Accounting clerks II	1,193	40.0	221.50
Manufacturing	187	40.0	248.00
Nonmanufacturing	1,006	40.0	217.00
Transportation and utilities	112	40.0	248.00
Accounting clerks III	1,362	39.5	242.00
Manufacturing	204	39.5	266.00
Nonmanufacturing	1,158	39.5	237.50
Accounting clerks IV	581	39.5	298.00
Nonmanufacturing	353	39.5	305.50
Transportation and utilities	78	39.0	388.00
Payroll clerks	404	39.5	250.50
Manufacturing	131	39.5	270.00
Nonmanufacturing	273	39.5	241.50
Transportation and utilities	42	40.0	323.50
Key entry operators	1,901	39.5	237.00
Manufacturing	533	40.0	244.50
Nonmanufacturing	1,368	39.5	234.00
Transportation and utilities	161	39.5	294.00
Key entry operators I	1,142	39.5	222.50
Manufacturing	280	39.5	227.50
Nonmanufacturing	862	39.5	221.00
Transportation and utilities	112	40.0	262.00
Key entry operators II	759	40.0	258.50
Manufacturing	253	40.0	264.00
Nonmanufacturing	506	39.5	255.50
Transportation and utilities	49	38.5	368.00
Professional and technical occupations - men			
Computer systems analysts (business)	630	39.5	545.50
Nonmanufacturing	487	39.5	551.00
Transportation and utilities	324	39.0	561.50
Computer systems analysts (business) I	56	40.0	464.00
Computer systems analysts (business) II	279	39.5	503.00
Nonmanufacturing	229	39.5	508.50
Transportation and utilities	153	39.0	514.50
Computer systems analysts (business) III	295	39.5	600.50
Nonmanufacturing	221	39.5	602.50
Transportation and utilities	138	39.0	628.00
Computer programmers (business)	450	39.5	446.00
Nonmanufacturing	352	39.5	444.50
Computer programmers (business) II	214	40.0	412.50
Nonmanufacturing	189	40.0	414.00

See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Denver-Boulder, Colo., December 1981 —Continued

Sex,[2] occupation, and industry division	Number of workers	Average (mean)[2]	
		Weekly hours[1] (standard)	Weekly earnings (in dollars)[1]
Computer programmers (business) III	193	39.5	514.00
Manufacturing	61	40.0	501.50
Nonmanufacturing	132	39.5	520.00
Computer operators	559	39.5	332.50
Nonmanufacturing	457	39.5	330.00
Transportation and utilities	124	39.5	399.50
Computer operators I	87	39.0	242.00
Nonmanufacturing	68	38.5	232.50
Computer operators II	276	39.5	316.50
Nonmanufacturing	235	39.5	314.50
Transportation and utilities	50	39.5	365.50
Computer operators III	196	39.5	395.50
Nonmanufacturing	154	39.5	397.00
Drafters	895	40.0	347.00
Manufacturing	607	40.0	340.50
Nonmanufacturing	288	39.5	360.50
Drafters III	248	40.0	293.50
Manufacturing	177	40.0	291.50
Nonmanufacturing	71	40.0	298.50
Drafters IV	259	39.5	346.50
Manufacturing	161	40.0	346.50
Nonmanufacturing	98	39.5	345.50
Drafters V	295	40.0	418.50
Manufacturing	199	40.0	413.50
Nonmanufacturing	96	39.5	428.50
Electronics technicians:			
Nonmanufacturing	591	40.0	468.00
Transportation and utilities	492	40.0	461.50
Electronics technicians II	808	40.0	419.00
Nonmanufacturing	426	40.0	451.00
Transportation and utilities	409	40.0	450.00
Electronics technicians III:			
Nonmanufacturing	185	39.5	511.50
Transportation and utilities	83	38.5	517.50
Professional and technical occupations – women			
Computer systems analysts (business)	251	39.5	488.00
Nonmanufacturing	174	39.5	511.50
Transportation and utilities	129	39.0	542.50
Computer systems analysts (business) II	144	39.5	477.00
Nonmanufacturing	103	39.5	484.00
Transportation and utilities	72	39.0	500.50
Computer systems analysts (business) III:			
Nonmanufacturing	56	39.0	597.50
Computer programmers (business):			
Nonmanufacturing	240	39.0	399.50
Computer programmers (business) II:			
Nonmanufacturing	153	39.5	399.50
Computer programmers (business) III	103	38.5	466.00
Nonmanufacturing	61	38.0	439.00
Computer operators	390	40.0	351.50
Nonmanufacturing	324	39.5	360.50
Computer operators I	90	39.5	233.50
Nonmanufacturing	73	39.5	237.50
Computer operators II	200	39.5	348.00
Nonmanufacturing	165	39.5	352.00
Drafters:			
Nonmanufacturing	57	39.5	326.00
Drafters V	54	40.0	378.00
Registered industrial nurses	77	40.0	390.00
Manufacturing	60	40.0	391.50

See footnotes at end of tables.

Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[3]	Middle range[3]	Under 6.00	6.00 and under 6.20	6.20 – 6.60	6.60 – 7.00	7.00 – 7.40	7.40 – 7.80	7.80 – 8.20	8.20 – 8.60	8.60 – 9.00	9.00 – 9.40	9.40 – 9.80	9.80 – 10.20	10.20 – 10.60	10.60 – 11.00	11.00 – 11.40	11.40 – 11.80	11.80 – 12.20	12.20 – 12.60	12.60 – 13.00	13.00 – 13.40	13.40 – 13.80	13.80 – 14.20	14.20 and over
Maintenance carpenters	85	11.07	11.27	9.73–11.83	-	-	-	-	-	-	-	-	2	7	13	2	1	-	34	2	20	-	-	2	-	-	2
Maintenance electricians	427	10.83	11.68	9.65–11.83	-	-	-	19	-	1	-	3	21	23	71	25	21	7	8	85	98	6	30	-	-	-	9
Manufacturing	309	10.87	11.28	9.65–11.94	-	-	-	-	-	1	-	3	21	23	51	25	19	7	8	22	93	6	30	-	-	-	-
Nonmanufacturing	118	10.73	11.68	9.50–11.68	-	-	-	19	-	-	-	-	-	-	20	-	2	-	-	63	5	-	-	-	-	-	9
Maintenance painters	124	8.56	9.00	6.00–11.03	2	48	-	-	-	-	5	-	1	18	7	3	-	1	27	1	11	-	-	-	-	-	-
Manufacturing	51	10.79	11.03	9.85–11.03	-	-	-	-	-	-	-	-	-	7	6	1	-	1	26	-	10	-	-	-	-	-	-
Maintenance machinists	486	10.95	11.68	9.22–11.83	-	-	-	-	-	1	18	7	85	13	9	10	7	14	22	155	116	5	7	12	5	-	-
Manufacturing	392	10.77	11.75	8.99–11.83	-	-	-	-	-	1	18	7	85	13	9	10	7	14	22	61	116	5	7	12	5	-	-
Maintenance mechanics (machinery)	942	10.23	10.44	9.00–11.83	-	-	57	3	2	16	5	46	105	106	45	48	119	84	11	14	244	15	1	6	1	8	6
Manufacturing	797	10.44	10.44	9.34–11.83	-	-	-	3	2	16	5	30	105	78	40	47	119	84	11	13	228	15	1	-	-	-	-
Nonmanufacturing	145	9.03	8.50	6.50–11.95	-	-	57	-	-	-	-	16	-	28	5	1	-	-	-	1	16	-	-	6	1	8	6
Transportation and utilities	27	12.95	13.91	13.00–14.07	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	1	-	-	-	6	1	8	*6
Maintenance mechanics (motor vehicles)	1,197	10.64	10.00	9.37–11.58	-	-	-	5	4	-	13	26	64	399	56	53	70	98	32	87	29	19	36	46	143	6	11
Manufacturing	147	10.23	10.25	8.84–11.02	-	-	-	-	-	-	5	2	44	-	3	3	22	10	30	8	20	-	-	-	-	-	-
Nonmanufacturing	1,050	10.70	9.90	9.37–12.17	-	-	-	5	4	-	8	24	20	399	53	50	48	88	2	79	9	19	36	46	143	6	11
Transportation and utilities	501	11.76	11.58	10.35–13.64	-	-	-	-	4	-	8	8	20	8	-	32	48	81	-	79	3	19	8	23	143	6	11
Machine-tool operators (toolroom)	197	9.67	9.71	7.25–11.99	-	-	-	-	72	-	-	-	-	21	11	11	6	10	5	-	40	-	21	-	-	-	-
Manufacturing	197	9.67	9.71	7.25–11.99	-	-	-	-	72	-	-	-	-	21	11	11	6	10	5	-	40	-	21	-	-	-	-
Tool and die makers	257	11.51	12.18	9.78–12.47	-	-	-	-	-	-	-	18	-	-	55	-	4	14	5	15	18	78	8	31	12	-	1
Manufacturing	257	11.51	12.18	9.78–12.47	-	-	-	-	-	-	-	18	-	-	55	-	4	14	5	15	18	76	8	31	12	-	1
Stationary engineers	327	11.07	11.51	9.85–11.95	3	1	-	2	1	4	4	6	3	23	19	33	2	-	15	74	111	10	9	1	1	3	2
Manufacturing	139	11.60	11.51	11.51–12.15	-	-	-	-	-	-	-	-	1	1	-	13	-	-	-	74	33	10	5	1	-	1	-
Nonmanufacturing	188	10.68	11.30	9.50–11.95	3	1	-	2	1	4	4	6	2	22	19	20	2	-	15	-	78	-	4	-	1	2	2

* All workers were at $14.20 to $14.60.
Also see footnotes at end of tables.

Table A-5. Hourly earnings of material movement and custodial workers in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[3]	Middle range[4]	Under 3.60	3.60 and under 3.80	3.80 – 4.00	4.00 – 4.40	4.40 – 4.80	4.80 – 5.20	5.20 – 5.60	5.60 – 6.00	6.00 – 6.40	6.40 – 6.80	6.80 – 7.20	7.20 – 7.60	7.60 – 8.00	8.00 – 8.40	8.40 – 8.80	8.80 – 9.20	9.20 – 9.60	9.60 – 10.00	10.00 – 10.40	10.40 – 10.80	10.80 – 11.60	11.60 – 12.40	12.40 and over
Truckdrivers	5,752	8.87	8.38	6.25-11.21	–	–	21	117	27	131	226	31	948	63	156	854	138	278	155	155	96	70	324	83	599	362	* 918
Manufacturing	971	8.74	9.82	7.41-10.37	–	–	–	50	12	18	53	–	42	12	42	56	9	26	56	78	14	53	291	83	76	–	–
Nonmanufacturing	4,781	8.89	7.70	6.25-11.64	–	–	21	67	15	113	173	31	906	51	114	798	129	252	99	77	82	17	33	–	523	362	918
Transportation and utilities	1,915	10.66	11.04	8.38-12.74	–	–	–	–	–	–	–	–	88	4	4	240	–	245	69	31	77	6	30	–	201	2	918
Truckdrivers, light truck	407	5.66	5.25	4.60- 6.25	–	–	–	96	22	39	109	17	28	20	10	21	–	2	30	–	–	13	–	–	–	–	–
Manufacturing	161	5.84	5.23	4.60- 8.13	–	–	–	50	7	18	38	–	6	–	–	1	–	2	26	–	–	13	–	–	–	–	–
Nonmanufacturing	246	5.54	5.25	5.00- 6.25	–	–	–	46	15	21	71	17	22	20	10	20	–	–	4	–	–	–	–	–	–	–	–
Truckdrivers, medium truck	2,553	8.60	7.41	6.25-11.04	–	–	21	21	5	67	55	2	742	7	49	530	34	80	26	36	11	5	31	–	195	11	625
Manufacturing	63	7.16	7.23	6.53- 7.87	–	–	–	–	5	–	5	–	6	7	8	10	9	3	–	5	2	2	1	–	–	–	–
Nonmanufacturing	2,490	8.64	7.41	6.25-12.73	–	–	21	21	–	67	50	2	736	–	41	520	25	77	26	31	9	3	30	–	195	11	625
Transportation and utilities	969	11.62	12.73	11.04-12.74	–	–	–	–	–	–	–	–	–	–	–	–	–	76	–	31	9	3	30	–	195	–	625
Truckdrivers, heavy truck	870	9.01	10.00	7.53-10.37	–	–	–	–	–	16	–	–	100	5	20	245	–	12	–	5	12	12	272	75	40	2	54
Manufacturing	410	9.93	10.37	10.00-10.37	–	–	–	–	–	–	–	–	4	5	20	5	–	10	–	5	12	2	272	75	–	–	–
Truckdrivers, tractor-trailer	1,627	9.95	11.20	8.38-11.64	–	–	–	–	–	–	62	12	78	4	50	40	104	109	99	78	73	26	7	2	338	349	194
Manufacturing	305	8.85	8.90	7.43-10.70	–	–	–	–	–	–	10	–	26	–	14	40	–	11	30	68	–	24	4	2	76	–	–
Nonmanufacturing	1,322	10.20	11.21	8.38-11.68	–	–	–	–	–	–	52	12	52	4	36	–	104	98	69	10	73	4	3	–	262	349	194
Transportation and utilities	444	10.45	9.40	8.55-12.78	–	–	–	–	–	–	–	–	8	4	4	–	–	94	69	–	68	3	–	–	–	–	194
Shippers	211	8.23	7.87	5.83-11.78	–	–	–	–	–	35	1	18	9	12	7	17	9	18	9	10	2	1	–	8	–	55	–
Manufacturing	98	7.27	7.43	6.41- 8.14	–	–	–	–	–	13	–	–	9	11	6	16	6	17	8	10	2	–	–	–	–	–	–
Nonmanufacturing	113	9.07	10.76	5.80-11.78	–	–	–	–	–	22	1	18	–	1	1	1	3	1	1	–	–	1	–	8	–	55	–
Receivers	184	6.77	6.00	5.19- 8.25	–	–	–	25	2	19	36	–	17	7	18	2	8	6	13	2	10	–	–	8	1	10	–
Nonmanufacturing	146	6.65	6.00	5.15- 7.85	–	–	–	25	2	12	27	–	17	7	16	–	5	5	11	1	–	–	–	8	–	10	–
Shippers and receivers	591	7.43	7.71	5.97- 8.49	–	–	6	21	17	15	50	79	26	16	29	31	44	65	65	54	1	10	17	4	41	–	–
Manufacturing	377	7.59	7.96	5.97- 8.49	–	–	6	–	6	10	10	70	10	10	7	24	40	35	65	54	1	8	17	4	–	–	–
Nonmanufacturing	214	7.15	6.61	5.35- 8.38	–	–	–	21	11	5	40	9	16	6	22	7	4	30	–	–	–	2	–	–	41	–	–
Warehousemen	2,480	8.41	7.90	6.31-10.87	–	1	12	17	91	105	206	102	106	114	143	282	90	145	57	39	28	101	132	70	378	–	* * 261
Manufacturing	538	7.56	6.98	6.32- 9.54	–	–	–	–	24	18	13	33	62	57	92	17	10	38	25	8	15	44	82	–	–	–	–
Nonmanufacturing	1,942	8.65	8.28	6.30-11.07	–	1	12	17	67	87	193	69	44	57	51	265	80	107	32	31	13	57	50	70	378	–	261
Transportation and utilities	538	11.18	11.47	9.76-12.73	–	–	–	–	–	–	–	–	–	1	4	4	4	67	2	5	–	33	45	3	89	–	261
Order fillers	2,935	7.99	7.41	6.25-10.72	–	–	95	–	61	46	163	58	496	7	36	882	45	64	70	30	5	21	107	156	593	–	–
Manufacturing	295	8.86	8.72	8.33-10.31	–	–	–	–	–	–	9	16	4	4	8	–	–	64	48	30	5	–	107	–	–	–	–
Nonmanufacturing	2,640	7.89	7.41	6.25-10.72	–	–	95	–	61	46	154	42	492	3	28	882	45	–	22	–	–	21	–	156	593	–	–
Material handling laborers	1,083	8.34	8.24	6.18-10.72	4	11	22	20	56	27	58	20	256	10	24	20	5	52	24	18	7	1	13	230	65	–	# 140
Manufacturing	247	6.17	5.65	5.17- 7.10	–	–	–	–	45	18	54	15	27	10	24	20	4	1	14	1	–	1	13	–	–	–	–
Nonmanufacturing	836	8.98	10.72	6.25-10.72	4	11	22	20	11	9	4	5	229	–	–	–	1	51	10	17	7	–	–	230	65	–	140
Transportation and utilities	202	11.46	12.73	8.98-12.73	–	–	–	–	–	–	–	–	–	–	–	–	1	33	4	17	7	–	–	–	–	–	140
Forklift operators	1,421	9.11	9.40	7.90-11.19	–	–	–	–	12	70	70	16	34	87	10	4	342	3	11	24	33	11	141	109	371	–	73
Manufacturing	427	8.60	9.60	6.73-10.20	–	–	–	–	–	26	8	–	33	86	9	4	6	3	11	24	–	11	141	67	–	–	–
Nonmanufacturing	994	9.34	9.40	7.90-11.41	–	–	–	–	12	44	64	16	1	1	1	–	336	–	–	–	33	–	–	42	371	–	73
Transportation and utilities	75	12.64	12.73	12.73-12.73	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	# # 73
Guards	3,057	4.52	3.90	3.55- 4.85	* # 882	569	142	413	272	215	205	21	39	64	6	24	14	14	15	9	22	116	–	–	15	–	–
Manufacturing	316	7.96	8.68	6.68- 9.82	–	–	–	–	20	26	4	8	8	56	6	7	9	11	14	9	22	116	–	–	–	–	–
Nonmanufacturing	2,741	4.12	3.75	3.55- 4.50	882	569	142	413	252	189	201	13	31	8	–	17	5	3	1	–	–	–	–	–	15	–	–

See footnotes at end of tables.

Table A-5. Hourly earnings of material movement and custodial workers in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean[2]	Median[3]	Middle range[4]	Under 3.60	3.60 and under 3.80	3.80 – 4.00	4.00 – 4.40	4.40 – 4.80	4.80 – 5.20	5.20 – 5.60	5.60 – 6.00	6.00 – 6.40	6.40 – 6.80	6.80 – 7.20	7.20 – 7.60	7.60 – 8.00	8.00 – 8.40	8.40 – 8.80	8.80 – 9.20	9.20 – 9.60	9.60 – 10.00	10.00 – 10.40	10.40 – 10.80	10.80 – 11.60	11.60 – 12.40	12.40 and over
Guards I	2,250	3.96	3.75	3.50– 4.05	882	507	134	387	145	61	48	12	13	47	6	7	8	7	3	2	1	–	–	–	–	–	–
Manufacturing	106	6.38	6.68	5.82– 6.74	–	–	–	–	20	2	4	8	8	39	6	7	3	4	2	2	1	–	–	–	–	–	–
Nonmanufacturing	2,144	3.84	3.75	3.50– 4.00	882	507	134	387	125	59	44	4	5	8	–	–	5	3	1	–	–	–	–	–	–	–	–
Guards II	807	6.06	5.25	4.75– 6.74	–	62	8	48	127	154	157	9	26	17	–	17	6	7	12	7	21	116	–	–	15	–	–
Nonmanufacturing	597	5.11	4.98	4.55– 5.56	–	62	8	48	127	130	157	9	26	–	–	17	–	–	–	–	–	–	–	–	15	–	–
Janitors, porters, and cleaners	5,542	4.95	4.70	3.60– 4.92	# * 1354	342	69	229	1819	603	84	50	103	56	45	143	35	218	21	61	201	11	78	–	11	–	9
Manufacturing	705	7.25	8.05	5.89– 8.39	–	5	–	24	116	13	1	19	65	30	39	19	12	211	10	9	56	1	75	–	–	–	–
Nonmanufacturing	4,837	4.62	4.70	3.50– 4.77	1354	337	69	205	1703	590	83	31	38	26	6	124	23	7	11	52	145	10	3	–	11	–	9
Transportation and utilities	170	7.76	7.56	6.45– 8.83	–	–	–	–	–	18	6	13	–	12	–	46	15	7	6	19	–	10	3	–	6	–	9

* Workers were distributed as follows: 846 at $12.40 to $13.20; and 72 at $13.20 to $14.00.
* * All workers were at $12.40 to $13.20.
All workers were at $12.40 to $13.20.
All workers were at $12.40 to $13.20.

* # Workers were distributed as follows: 252 at $3.20 to $3.40; and 630 at $3.40 to $3.60.
# * Workers were distributed as follows: 1053 at $3.20 to $3.40; and 301 at $3.40 to $3.60.

Also see footnotes at end of tables.

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Denver-Boulder, Colo., December 1981

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[3]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	85	11.07
Maintenance electricians	426	10.83
Manufacturing	308	10.87
Nonmanufacturing	118	10.73
Maintenance painters	124	8.56
Manufacturing	51	10.79
Maintenance machinists	485	10.95
Manufacturing	391	10.77
Maintenance mechanics (machinery)	937	10.23
Manufacturing	797	10.44
Nonmanufacturing	140	9.01
Maintenance mechanics (motor vehicles)	1,195	10.64
Manufacturing	147	10.23
Nonmanufacturing	1,048	10.70
Transportation and utilities	499	11.76
Machine-tool operators (toolroom)	195	9.67
Manufacturing	195	9.67
Tool and die makers	257	11.51
Manufacturing	257	11.51
Stationary engineers	323	11.06
Manufacturing	139	11.60
Nonmanufacturing	184	10.65
Material movement and custodial occupations - men		
Truckdrivers	5,699	8.87
Manufacturing	961	8.77
Nonmanufacturing	4,738	8.89
Transportation and utilities	1,889	10.64
Truckdrivers, light truck	390	5.68
Manufacturing	161	5.84
Nonmanufacturing	229	5.58
Truckdrivers, medium truck	2,527	8.56
Manufacturing	63	7.16
Nonmanufacturing	2,464	8.60
Transportation and utilities	943	11.80
Truckdrivers, heavy truck	860	9.04
Manufacturing	400	10.02
Truckdrivers, tractor-trailer	1,627	9.95
Manufacturing	305	8.85
Nonmanufacturing	1,322	10.20
Transportation and utilities	444	10.45
Shippers	172	8.52
Manufacturing	86	7.36
Nonmanufacturing	86	9.68
Receivers	166	6.98
Nonmanufacturing	135	6.80
Shippers and receivers	530	7.49
Manufacturing	331	7.68
Nonmanufacturing	199	7.17
Warehousemen	2,150	8.81
Nonmanufacturing	1,763	8.81
Transportation and utilities	521	11.24
Order fillers	2,659	7.98
Manufacturing	242	9.10
Nonmanufacturing	2,417	7.86
Material handling laborers	950	8.70
Nonmanufacturing	793	9.11
Transportation and utilities	200	11.49
Forklift operators	1,360	9.09
Manufacturing	397	8.63
Nonmanufacturing	963	9.27
Transportation and utilities	75	12.64
Guards	2,487	4.60
Manufacturing	280	7.93
Nonmanufacturing	2,207	4.18
Guards I	1,742	3.99
Manufacturing	92	6.34
Nonmanufacturing	1,650	3.86
Guards II	745	6.03
Nonmanufacturing	557	5.12
Janitors, porters, and cleaners	3,341	5.22
Manufacturing	625	7.13
Nonmanufacturing	2,716	4.78
Transportation and utilities	143	7.85
Material movement and custodial occupations - women		
Warehousemen:		
Nonmanufacturing	150	6.75
Order fillers	251	8.06
Nonmanufacturing	223	8.22
Shipping packers	87	7.36
Nonmanufacturing	73	7.77
Forklift operators	61	9.77
Guards	570	4.14
Nonmanufacturing	534	3.86
Guards II	62	6.49
Janitors, porters, and cleaners	2,187	4.55
Manufacturing	80	8.16
Nonmanufacturing	2,107	4.41
Transportation and utilities	27	7.31

See footnotes at end of tables.

Table A-7. Indexes of earnings and percent increases for selected occupational groups, Denver-Boulder, Colo., selected periods

Period[a]	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (December 1977 = 100):														
December 1980	131.6	130.4	134.7	134.4	131.3	(*)	127.4	137.0	134.6	129.7	132.1	131.1	(*)	131.7
December 1981	144.8	143.2	147.6	149.0	142.5	(*)	138.9	152.8	151.6	142.8	146.2	144.3	(*)	142.6
Percent increases:														
December 1972 to December 1973	7.2	(*)	6.6	7.5	7.8	6.7	(*)	6.0	6.5	7.8	7.4	(*)	8.2	7.6
December 1973 to December 1974	10.5	11.0	10.4	9.2	10.9	11.2	(*)	12.2	9.3	12.6	10.3	11.1	(*)	10.5
December 1974 to December 1975	9.0	6.6	7.8	8.7	8.6	9.2	(*)	5.8	8.9	6.2	8.8	6.4	(*)	9.5
December 1975 to December 1976	7.0	6.5	8.0	8.0	9.2	6.8	(*)	8.7	8.1	9.4	7.1	5.9	(*)	9.2
December 1976 to December 1977	7.7	7.4	7.6	8.6	9.5	6.7	7.2	7.6	7.6	8.9	8.0	7.5	(*)	9.5
December 1977 to December 1978	7.8	7.1	6.9	9.4	7.7	(*)	7.8	7.5	9.7	8.4	7.7	6.7	(*)	7.5
December 1978 to December 1979	10.2	9.7	11.6	10.7	10.3	(*)	9.1	12.6	11.0	10.6	10.6	9.8	(*)	10.1
December 1979 to December 1980	10.8	11.0	12.9	11.0	10.5	10.7	8.3	13.2	10.5	8.2	10.9	11.9	(*)	11.2
December 1980 to December 1981	10.0	9.8	9.6	10.9	8.5	8.5	9.0	11.5	12.6	10.1	10.7	10.1	(*)	8.3

See footnotes at end of tables.

Table A-8. Pay relationships in establishments with paired office clerical occupations, Denver-Boulder, Colo., December 1981

Occupation for which earnings are compared	Occupation for which average earnings equal 100																								
	Secretaries					Stenographers		Transcribing machine typists	Typists		File clerks			Messengers	Switchboard operators	Switchboard operator-receptionists	Order clerks		Accounting clerks				Payroll clerks	Key entry operators	
	I	II	III	IV	V	I	II		I	II	I	II	III				I	II	I	II	III	IV		I	II
Secretaries I	**100**	89	88	74	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	96	111	(*)	(*)	(*)	(*)	107	75	87	106	107
Secretaries II	112	**100**	87	78	66	(*)	109	111	124	107	150	126	117	140	111	108	106	(*)	(*)	112	102	87	98	112	101
Secretaries III	113	114	**100**	83	71	(*)	115	110	136	126	153	139	133	153	112	121	109	94	151	124	113	98	106	125	109
Secretaries IV	136	128	121	**100**	87	157	141	132	165	150	192	167	142	180	138	136	144	115	162	145	129	113	119	149	133
Secretaries V	(*)	151	140	115	**100**	154	147	138	168	159	202	187	156	199	152	155	(*)	(*)	(*)	155	155	125	132	182	155
Stenographers I	(*)	(*)	(*)	64	65	**100**	82	(*)	(*)	104	(*)	(*)	94	126	91	(*)	(*)	(*)	(*)	111	98	89	96	102	83
Stenographers II	(*)	92	87	71	68	122	**100**	(*)	127	114	(*)	(*)	102	138	118	104	(*)	(*)	(*)	(*)	97	93	91	122	101
Transcribing-machine typists	(*)	90	91	76	73	(*)	(*)	**100**	(*)	103	(*)	(*)	114	134	(*)	116	102	(*)	(*)	105	94	75	81	103	92
Typists I	(*)	81	73	61	60	(*)	79	(*)	**100**	85	125	105	98	108	91	98	79	(*)	(*)	102	86	80	80	93	75
Typists II	(*)	93	79	67	63	97	88	97	118	**100**	140	128	103	126	97	106	(*)	(*)	(*)	110	97	87	92	108	90
File clerks I	(*)	67	66	52	49	(*)	(*)	(*)	80	72	**100**	83	74	89	79	82	(*)	(*)	(*)	79	71	63	72	71	70
File clerks II	(*)	79	72	60	54	(*)	(*)	(*)	95	78	120	**100**	(*)	(*)	86	93	88	(*)	93	88	83	76	70	87	73
File clerks III	(*)	86	75	70	64	107	98	88	102	97	135	(*)	**100**	121	103	104	(*)	(*)	(*)	(*)	84	89	95	(*)	95
Messengers	(*)	71	65	55	50	79	72	75	93	79	112	(*)	82	**100**	82	88	81	(*)	(*)	88	78	74	76	85	71
Switchboard operators	104	90	90	72	66	110	85	(*)	109	103	127	116	97	122	**100**	111	108	82	(*)	100	92	81	79	99	87
Switchboard operator-receptionists	90	92	83	73	65	(*)	96	86	102	95	121	107	96	114	90	**100**	92	85	105	92	89	78	89	96	85
Order clerks I	(*)	95	91	70	(*)	(*)	(*)	98	126	(*)	(*)	113	(*)	124	93	108	**100**	78	(*)	103	90	77	89	99	101
Order clerks II	(*)	(*)	106	87	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	123	118	128	**100**	(*)	(*)	126	99	95	132	110
Accounting clerks I	(*)	(*)	66	62	(*)	(*)	(*)	(*)	(*)	(*)	(*)	107	(*)	(*)	(*)	95	(*)	(*)	**100**	85	87	74	83	96	(*)
Accounting clerks II	(*)	89	81	69	64	90	(*)	95	98	91	126	114	(*)	114	100	109	97	(*)	117	**100**	89	74	92	100	92
Accounting clerks III	94	98	89	77	64	102	103	106	117	103	140	120	118	128	109	112	111	79	115	113	**100**	80	97	103	92
Accounting clerks IV	133	114	102	88	80	113	107	133	125	115	158	131	113	135	123	128	130	101	135	135	126	**100**	111	133	104
Payroll clerks	116	104	95	84	76	104	110	123	125	109	140	142	105	132	127	112	112	105	121	109	103	90	**100**	115	103
Key entry operators I	95	89	80	67	55	98	82	97	108	93	141	115	(*)	117	101	105	101	76	104	100	97	75	87	**100**	80
Key entry operators II	94	99	92	75	64	120	99	108	133	111	144	136	105	142	115	117	99	91	(*)	109	109	97	97	125	**100**

NOTE: This matrix table shows the average (mean) relationship of earnings in establishments between any two occupations compared. Earnings for an occupation in the table stub are expressed as a percent of the earnings for an occupation in the column heading at the point where the data lines for the two intersect. For example, reading across the Secretaries II row, the 112 in the Secretaries I column indicates that Secretaries II average 112 percent of (or 12 percent more than) the earnings of Secretaries I.

See appendix A for method of computation.

Also see footnotes at end of tables.

Table A-9. Pay relationships in establishments with paired professional and technical occupations, Denver-Boulder, Colo., December 1981

Occupation for which earnings are compared	Occupation for which average earnings equal 100																
	Computer systems analysts (business)			Computer programmers (business)			Computer operators			Drafters				Electronics technicians			Registered industrial nurses
	I	II	III	I	II	III	I	II	III	II	III	IV	V	I	II	III	
Computer systems analysts (business) I	100	86	72	(*)	103	(*)	161	121	103	(*)	(*)	120	97	(*)	(*)	105	116
Computer systems analysts (business) II	116	100	83	145	116	88	198	144	122	(*)	164	132	112	(*)	116	109	128
Computer systems analysts (business) III	139	121	100	185	139	126	246	174	148	(*)	201	162	134	(*)	140	131	152
Computer programmers (business) I	(*)	69	54	100	75	53	131	106	88	(*)	(*)	96	(*)	(*)	(*)	(*)	(*)
Computer programmers (business) II	97	86	72	134	100	78	160	127	104	(*)	137	113	94	(*)	(*)	101	113
Computer programmers (business) III	(*)	114	79	188	127	100	220	158	129	(*)	174	141	134	(*)	(*)	(*)	117
Computer operators I	62	51	41	76	63	46	100	81	67	(*)	(*)	73	61	(*)	(*)	(*)	70
Computer operators II	83	69	57	95	79	63	124	100	82	(*)	113	95	81	(*)	(*)	75	90
Computer operators III	97	82	68	114	96	77	150	122	100	(*)	123	101	82	(*)	98	89	99
Drafters II	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100	84	76	69	92	79	(*)	66
Drafters III	(*)	61	50	(*)	73	57	(*)	89	82	120	100	82	69	99	85	70	78
Drafters IV	83	76	62	102	88	71	136	105	99	132	122	100	86	119	88	78	92
Drafters V	103	89	75	(*)	107	75	164	124	121	146	145	117	100	143	111	97	115
Electronics technicians I	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	109	101	84	70	100	83	70	(*)
Electronics technicians II	(*)	86	72	(*)	(*)	(*)	(*)	(*)	102	127	117	114	90	120	100	87	100
Electronics technicians III	95	91	76	(*)	99	(*)	(*)	134	112	(*)	144	129	103	144	116	100	112
Registered industrial nurses	86	78	66	(*)	89	85	143	111	101	153	126	109	87	(*)	100	89	100

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-10.Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations, Denver-Boulder, Colo., December 1981

Occupation for which earnings are compared	Occupation for which average earnings equal 100								
	Carpenters	Electricians	Painters	Machinists	Mechanics		Machine-tool operators (toolroom)	Tool and die makers	Stationary engineers
					Machinery	Motor vehicles			
Maintenance carpenters	**100**	99	101	98	(*)	102	(*)	(*)	(*)
Maintenance electricians	101	**100**	101	101	102	105	101	98	96
Maintenance painters	99	99	**100**	97	95	97	(*)	(*)	98
Maintenance machinists	102	99	103	**100**	100	104	98	94	100
Maintenance mechanics (machinery)	(*)	98	105	100	**100**	100	99	95	93
Maintenance mechanics (motor vehicles)	98	95	103	96	100	**100**	(*)	(*)	101
Machine-tool operators (toolroom)	(*)	99	(*)	102	101	(*)	**100**	93	(*)
Tool and die makers	(*)	102	(*)	106	105	(*)	107	**100**	(*)
Stationary engineers	(*)	104	103	100	107	99	(*)	(*)	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-11.Pay relationships in establishments with paired material movement and custodial occupations, Denver-Boulder, Colo., December 1981

Occupation for which earnings are compared	Occupation for which average earnings equal 100													
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehouse-men	Order fillers	Material handling laborers	Forklift operators	Guards		Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer								I	II	
Truckdrivers, light truck	**100**	(*)	(*)	(*)	102	98	106	110	103	(*)	(*)	(*)	(*)	112
Truckdrivers, medium truck	(*)	**100**	(*)	98	(*)	(*)	93	101	101	(*)	103	(*)	(*)	114
Truckdrivers, heavy truck	(*)	(*)	**100**	(*)	(*)	(*)	(*)	109	(*)	(*)	102	(*)	(*)	150
Truckdrivers, tractor-trailer	(*)	102	(*)	**100**	(*)	(*)	103	108	107	108	107	(*)	(*)	130
Shippers	98	(*)	(*)	(*)	**100**	98	(*)	95	108	102	(*)	147	(*)	115
Receivers	102	(*)	(*)	(*)	102	**100**	(*)	100	110	102	(*)	131	(*)	115
Shippers and receivers	95	107	(*)	97	(*)	(*)	**100**	109	102	122	108	(*)	(*)	121
Warehousemen	91	99	92	93	105	100	92	**100**	(*)	120	101	120	103	119
Order fillers	97	99	(*)	93	93	91	98	(*)	**100**	96	102	156	(*)	119
Material handling laborers	(*)	(*)	(*)	93	98	98	82	84	104	**100**	98	144	(*)	124
Forklift operators	(*)	97	98	93	(*)	(*)	93	99	98	102	**100**	146	(*)	112
Guards I	(*)	(*)	(*)	(*)	68	76	(*)	83	64	69	68	**100**	(*)	100
Guards II	(*)	(*)	(*)	(*)	(*)	(*)	(*)	97	(*)	(*)	(*)	(*)	**100**	107
Janitors, porters, and cleaners	89	88	87	77	87	87	83	84	84	81	89	100	93	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	140 and under 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 420	420 – 460	460 – 500	500 – 540	540 – 580	580 – 620
Secretaries	2,272	40.0	303.50	295.50	250.00– 348.50	–	1	–	5	12	44	168	182	278	239	268	204	190	209	151	218	51	33	11	7	1
Manufacturing	1,366	40.0	305.50	296.00	253.00– 345.00	–	–	–	–	–	4	70	108	204	163	186	148	121	109	81	133	34	19	3	2	1
Nonmanufacturing	906	39.5	300.50	295.00	238.50– 353.00	–	1	–	5	12	40	98	74	74	78	102	56	69	100	70	85	17	14	8	5	–
Transportation and utilities	339	39.5	350.50	350.50	307.00– 388.50	–	–	–	–	–	–	8	17	16	16	24	23	34	45	49	68	13	13	8	5	–
Secretaries I	97	40.0	235.50	227.00	217.00– 240.00	–	–	–	–	–	–	41	24	18	4	4	3	1	2	–	–	–	–	–	–	–
Secretaries II	527	40.0	262.50	250.00	226.50– 293.50	–	–	–	5	10	42	60	75	104	71	43	39	23	9	35	10	1	–	–	–	–
Manufacturing	250	40.0	265.50	250.00	239.50– 280.50	–	–	–	–	–	3	26	36	82	38	13	22	12	7	3	7	1	–	–	–	–
Nonmanufacturing	277	40.0	259.50	249.00	207.00– 298.50	–	–	–	5	10	39	34	39	22	33	30	17	11	2	32	3	–	–	–	–	–
Secretaries III	1,053	40.0	303.50	297.50	258.00– 345.00	–	1	–	–	2	2	59	75	133	120	152	105	104	109	78	88	14	7	3	1	–
Manufacturing	708	40.0	299.00	290.00	259.00– 336.00	–	–	–	–	–	1	11	57	110	105	113	80	62	62	56	46	4	1	–	–	–
Nonmanufacturing	345	39.5	313.00	320.50	253.00– 357.00	–	1	–	–	2	1	48	18	23	15	39	25	42	47	22	42	10	6	3	1	–
Transportation and utilities	176	39.5	350.50	342.00	308.50– 388.50	–	–	–	–	–	–	–	4	10	10	16	10	28	30	12	36	10	6	3	1	–
Secretaries IV	509	40.0	348.50	345.50	299.00– 399.00	–	–	–	–	–	–	8	2	21	37	63	53	51	73	37	107	32	16	5	3	1
Manufacturing	312	40.0	354.00	347.50	308.50– 400.50	–	–	–	–	–	–	–	1	6	18	37	41	42	37	21	71	26	9	1	1	1
Nonmanufacturing	197	39.5	339.50	345.00	286.00– 385.50	–	–	–	–	–	–	8	1	15	19	26	12	9	36	16	36	6	7	4	2	–
Transportation and utilities	66	40.0	403.50	401.00	367.50– 410.50	–	–	–	–	–	–	–	–	–	–	1	1	1	11	8	29	3	6	4	2	–
Secretaries V	69	40.0	391.50	355.50	338.00– 450.00	–	–	–	–	–	–	–	2	–	1	2	4	10	16	1	13	4	10	3	3	–
Stenographers	146	39.5	327.00	339.00	281.00– 378.50	–	–	–	–	3	–	–	3	16	13	10	15	24	18	12	31	–	1	–	–	–
Manufacturing	72	39.0	313.00	335.00	265.00– 341.00	–	–	–	–	–	–	–	1	16	6	–	9	20	10	8	2	–	–	–	–	–
Nonmanufacturing	74	40.0	340.50	358.00	289.00– 389.50	–	–	–	–	3	–	–	2	–	7	10	6	4	8	4	29	–	1	–	–	–
Transportation and utilities	74	40.0	340.50	358.00	289.00– 389.50	–	–	–	–	3	–	–	2	–	7	10	6	4	8	4	29	–	1	–	–	–
Stenographers I	69	40.0	288.00	274.00	240.00– 319.00	–	–	–	–	3	–	–	3	16	13	10	7	4	5	3	5	–	–	–	–	–
Stenographers II	77	39.0	362.00	358.50	339.00– 385.50	–	–	–	–	–	–	–	–	–	–	–	8	20	13	9	26	–	1	–	–	–
Nonmanufacturing: Transportation and utilities	31	40.0	390.50	390.00	381.50– 396.50	–	–	–	–	–	–	–	–	–	–	–	–	–	3	3	24	–	1	–	–	–
Typists	346	39.5	222.00	213.00	193.50– 243.00	–	–	2	38	40	18	118	39	35	17	11	22	4	2	–	–	–	–	–	–	–
Manufacturing	171	40.0	233.50	220.00	204.50– 261.50	–	–	–	10	9	12	59	19	17	15	8	19	3	–	–	–	–	–	–	–	–
Nonmanufacturing	175	39.0	211.00	203.00	182.00– 221.00	–	–	2	28	31	6	59	20	18	2	3	3	1	2	–	–	–	–	–	–	–
Typists I	180	39.5	202.50	198.50	181.50– 219.50	–	–	2	38	39	16	51	18	5	8	3	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	115	39.0	197.50	188.50	180.00– 219.50	–	–	2	28	31	4	32	17	1	–	–	–	–	–	–	–	–	–	–	–	–
Typists II	166	39.5	243.50	230.00	213.00– 262.00	–	–	–	–	1	2	67	21	30	9	8	22	4	2	–	–	–	–	–	–	–
Manufacturing	106	40.0	247.00	230.00	214.00– 279.50	–	–	–	–	1	–	40	18	13	7	5	19	3	–	–	–	–	–	–	–	–
Nonmanufacturing	60	39.0	237.50	221.00	203.00– 259.00	–	–	–	–	–	2	27	3	17	2	3	3	1	2	–	–	–	–	–	–	–
File clerks	195	39.0	171.50	162.00	144.50– 179.00	71	26	35	14	9	12	9	11	1	2	2	–	–	–	–	3	–	–	–	–	–
Nonmanufacturing	178	39.0	169.50	155.50	144.50– 170.50	71	26	35	7	3	10	9	11	1	2	–	–	–	–	–	3	–	–	–	–	–
File clerks I	117	38.5	154.00	148.00	144.50– 162.00	60	18	30	2	–	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	61	39.5	193.00	187.00	155.50– 219.50	11	8	5	6	7	3	9	11	–	–	2	–	–	–	–	1	–	–	–	–	–
Messengers	127	39.5	186.50	180.50	158.00– 207.50	26	11	14	5	28	4	26	6	2	1	–	–	–	–	4	–	–	–	–	–	–
Nonmanufacturing	103	39.5	185.00	180.50	152.00– 201.50	26	11	7	2	28	1	19	2	2	1	–	–	–	–	4	–	–	–	–	–	–
Switchboard operators	151	40.0	225.50	220.00	160.00– 277.00	35	6	9	6	–	6	12	19	5	19	13	3	3	8	6	1	–	–	–	–	–
Nonmanufacturing	111	40.0	210.00	193.00	145.50– 255.50	35	6	9	5	–	4	3	19	2	12	3	1	1	4	6	1	–	–	–	–	–

See footnotes at end of tables.

Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[2]	Median[2]	Middle range[2]	140 and under 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 420	420 – 460	460 – 500	500 – 540	540 – 580	580 – 620
Switchboard operator-receptionists	83	39.5	209.50	198.00	173.50– 226.50	3	5	8	10	12	5	17	6	–	3	9	2	–	2	–	1	–	–	–	–	–
Nonmanufacturing	64	39.5	202.00	182.00	169.50– 225.50	3	5	8	10	10	5	5	6	–	3	8	–	–	–	–	1	–	–	–	–	–
Order clerks	70	40.0	241.00	221.50	196.00– 267.00	1	1	7	7	–	2	15	6	2	13	3	3	6	2	–	2	–	–	–	–	–
Accounting clerks	1,434	40.0	253.50	232.00	199.00– 293.50	8	5	12	79	145	122	248	131	127	121	103	69	38	64	59	76	20	7	–	–	–
Manufacturing	534	40.0	262.50	245.50	207.50– 304.50	–	–	1	10	38	42	108	54	52	57	28	48	20	18	16	26	11	7	–	–	–
Nonmanufacturing	900	40.0	248.50	224.50	192.00– 283.00	8	5	11	69	109	80	140	77	75	64	75	21	18	46	43	50	9	–	–	–	–
Accounting clerks II	352	40.0	216.50	198.00	180.00– 249.00	8	5	11	49	68	44	49	31	19	22	30	4	2	18	2	–	–	–	–	–	–
Manufacturing	60	40.0	240.50	228.00	216.00– 261.50	–	–	–	2	2	4	8	18	6	14	2	–	2	–	2	–	–	–	–	–	–
Nonmanufacturing	302	40.0	212.00	192.50	180.00– 230.00	8	5	11	47	66	40	41	13	13	8	28	4	–	18	–	–	–	–	–	–	–
Accounting clerks III	592	39.5	258.00	241.00	207.50– 293.50	–	–	1	17	34	59	119	57	63	54	45	18	23	37	49	15	1	–	–	–	–
Manufacturing	172	39.5	264.00	249.00	207.50– 321.00	–	–	1	8	6	19	30	10	23	16	6	10	10	14	10	8	1	–	–	–	–
Nonmanufacturing	420	39.5	255.50	233.00	207.50– 292.50	–	–	–	9	28	40	89	47	40	38	39	8	13	23	39	7	–	–	–	–	–
Accounting clerks IV	378	40.0	298.50	280.50	237.50– 359.50	–	–	–	5	5	3	44	41	44	45	27	47	13	9	3	61	19	7	–	–	–
Manufacturing	224	40.0	290.50	279.50	232.50– 314.50	–	–	–	–	–	3	36	26	23	27	20	38	8	4	4	18	10	7	–	–	–
Nonmanufacturing	154	40.0	310.00	294.00	246.00– 392.50	–	–	–	5	5	–	8	15	21	18	7	9	5	5	4	43	9	–	–	–	–
Transportation and utilities	67	40.0	388.50	393.00	389.00– 409.00	–	–	–	–	–	–	–	–	2	–	1	1	2	5	4	43	9	–	–	–	–
Payroll clerks	140	40.0	261.00	244.00	210.00– 296.00	2	–	1	–	13	12	13	24	19	9	12	3	5	12	8	6	1	–	–	–	–
Manufacturing	57	40.0	278.00	273.00	225.00– 347.00	–	–	–	–	–	5	7	7	7	6	4	3	3	9	6	–	–	–	–	–	–
Nonmanufacturing	83	40.0	249.50	230.00	195.00– 280.00	2	–	1	–	13	7	6	17	12	3	8	–	2	3	2	6	1	–	–	–	–
Key entry operators	820	40.0	244.00	234.50	206.00– 274.50	5	15	19	19	39	38	153	153	114	90	71	37	22	14	14	15	2	–	–	–	–
Manufacturing	476	40.0	245.00	240.00	214.50– 274.50	–	–	–	13	32	10	91	92	79	60	50	27	16	4	2	–	–	–	–	–	–
Nonmanufacturing	344	39.5	243.00	234.50	201.00– 275.00	5	15	19	6	7	28	62	61	35	30	21	10	6	10	12	15	2	–	–	–	–
Transportation and utilities	80	40.0	314.00	314.00	275.00– 370.00	–	–	–	–	–	6	4	2	6	7	10	7	6	3	12	15	2	–	–	–	–
Key entry operators I	492	39.5	224.50	217.00	196.00– 248.50	5	15	19	19	39	36	136	87	52	34	22	3	10	9	6	–	–	–	–	–	–
Manufacturing	247	39.5	225.00	216.50	202.50– 253.00	–	–	–	13	32	8	78	39	35	26	12	–	4	–	–	–	–	–	–	–	–
Nonmanufacturing	245	39.5	223.50	219.00	192.00– 237.00	5	15	19	6	7	28	58	48	17	8	10	3	6	9	6	–	–	–	–	–	–
Transportation and utilities	51	40.0	281.00	280.50	242.50– 335.00	–	–	–	–	–	6	4	2	6	6	10	3	6	2	6	–	–	–	–	–	–
Key entry operators II	328	40.0	273.50	264.50	238.00– 297.00	–	–	–	–	–	2	17	66	62	56	49	34	12	5	8	15	2	–	–	–	–
Manufacturing	229	40.0	266.00	260.50	234.50– 290.00	–	–	–	–	–	2	13	53	44	34	38	27	12	4	2	–	–	–	–	–	–
Nonmanufacturing	99	39.5	291.00	272.00	250.00– 317.00	–	–	–	–	–	–	4	13	18	22	11	7	–	1	6	15	2	–	–	–	–
Transportation and utilities	29	39.5	372.50	388.00	364.50– 392.00	–	–	–	–	–	–	–	–	–	1	–	4	–	1	6	15	2	–	–	–	–

See footnotes at end of tables.

Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[3]	Median[3]	Middle range[4]	180 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 and over
Computer systems analysts (business)	729	39.5	540.00	540.50	474.00– 603.00	–	–	–	–	–	2	5	9	13	6	15	22	24	98	88	148	108	100	51	22	20
Manufacturing	247	40.0	501.50	503.50	431.00– 577.00	–	–	–	–	–	–	5	7	12	6	12	9	15	41	26	42	31	26	7	3	5
Nonmanufacturing	482	39.0	559.50	556.00	507.50– 617.00	–	–	–	–	–	2	–	2	1	–	3	13	9	57	62	104	77	74	44	19	15
Transportation and utilities	428	39.0	558.00	551.50	506.50– 612.50	–	–	–	–	–	–	–	–	–	–	3	11	8	54	62	89	69	70	37	15	10
Computer systems analysts (business) I	92	40.0	425.00	421.50	349.00– 485.00	–	–	–	–	–	2	5	7	12	5	5	9	11	8	12	13	3	–	–	–	–
Manufacturing	50	40.0	375.50	362.00	344.00– 421.00	–	–	–	–	–	–	5	7	12	5	3	5	9	4	–	–	–	–	–	–	–
Computer systems analysts (business) II	324	39.5	501.00	506.50	460.00– 540.50	–	–	–	–	–	–	–	2	1	1	9	11	12	85	68	97	30	3	5	–	–
Manufacturing	94	40.0	469.50	461.00	441.50– 504.00	–	–	–	–	–	–	–	–	–	1	9	4	6	35	20	18	1	–	–	–	–
Nonmanufacturing	230	39.0	514.00	520.50	473.00– 551.00	–	–	–	–	–	–	–	2	1	–	–	7	6	50	48	79	29	3	5	–	–
Transportation and utilities	201	39.0	509.00	513.00	471.50– 540.50	–	–	–	–	–	–	–	–	–	–	–	7	6	50	48	64	23	3	–	–	–
Computer systems analysts (business) III	313	39.5	614.00	610.50	579.00– 650.00	–	–	–	–	–	–	–	–	–	–	1	2	1	5	8	36	75	97	46	22	20
Manufacturing	103	40.0	591.50	587.50	548.50– 625.50	–	–	–	–	–	–	–	–	–	–	–	–	–	2	6	24	30	26	7	3	5
Nonmanufacturing	210	39.0	624.50	620.50	594.00– 665.00	–	–	–	–	–	–	–	–	–	–	1	2	1	3	2	12	45	71	39	19	15
Transportation and utilities	187	39.0	624.50	620.00	595.00– 659.50	–	–	–	–	–	–	–	–	–	–	1	–	–	–	2	12	43	67	37	15	10
Computer programmers (business)	509	39.5	437.50	445.00	384.50– 490.00	–	–	–	8	8	8	7	21	47	21	46	21	48	116	87	49	16	5	1	–	–
Manufacturing	235	40.0	436.50	448.50	357.50– 513.00	–	–	–	8	7	7	7	13	18	7	18	14	9	37	33	39	15	2	1	–	–
Nonmanufacturing	274	39.5	438.50	443.00	386.00– 479.00	–	–	–	–	1	1	–	8	29	14	28	7	39	79	54	10	1	3	–	–	–
Computer programmers (business) I	56	39.5	312.50	316.50	272.50– 337.50	–	–	–	8	8	8	6	12	4	2	8	–	–	–	–	–	–	–	–	–	–
Computer programmers (business) II	284	40.0	429.00	439.50	378.50– 471.00	–	–	–	–	–	–	1	9	43	19	25	21	28	81	48	9	–	–	–	–	–
Manufacturing	84	40.0	405.50	397.00	366.50– 442.00	–	–	–	–	–	–	1	2	15	7	18	14	5	15	6	1	–	–	–	–	–
Nonmanufacturing	200	39.5	439.00	450.00	389.50– 478.50	–	–	–	–	–	–	–	7	28	12	7	7	23	66	42	8	–	–	–	–	–
Computer programmers (business) III	169	39.5	493.50	496.50	445.00– 537.00	–	–	–	–	–	–	–	–	–	–	13	–	20	35	39	40	16	5	1	–	–
Manufacturing	109	40.0	514.50	524.00	483.00– 538.00	–	–	–	–	–	–	–	–	–	–	–	–	4	22	27	38	15	2	1	–	–
Nonmanufacturing	60	38.5	456.00	442.50	423.00– 489.50	–	–	–	–	–	–	–	–	–	–	13	–	16	13	12	2	1	3	–	–	–
Computer operators	561	39.5	376.50	382.00	318.00– 419.50	11	14	5	15	39	25	44	44	33	43	57	95	13	14	109	–	–	–	–	–	–
Manufacturing	190	40.0	328.50	332.00	278.00– 384.50	8	13	2	3	22	12	27	17	18	16	29	10	7	–	6	–	–	–	–	–	–
Nonmanufacturing	371	39.5	401.50	419.50	340.50– 495.00	3	1	3	12	17	13	17	27	15	27	28	85	6	14	103	–	–	–	–	–	–
Computer operators I	59	40.0	246.00	261.00	211.50– 271.00	11	13	4	1	19	1	8	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Computer operators II	284	39.5	356.50	361.50	312.50– 419.50	–	1	1	14	19	21	35	35	15	15	42	79	2	4	1	–	–	–	–	–	–
Manufacturing	84	39.5	330.00	318.50	306.50– 373.50	–	–	1	2	8	9	25	9	6	3	21	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	200	39.5	367.50	389.00	329.50– 419.50	–	1	–	12	11	12	10	26	9	12	21	79	2	4	1	–	–	–	–	–	–
Computer operators III	218	40.0	438.50	466.00	377.50– 495.00	–	–	–	–	1	3	1	8	17	28	15	16	11	10	108	–	–	–	–	–	–
Manufacturing	66	40.0	383.50	372.50	354.00– 404.00	–	–	–	–	–	2	1	7	12	13	8	10	7	–	6	–	–	–	–	–	–
Drafters	442	39.5	360.00	349.00	299.00– 410.00	1	10	8	24	36	33	39	51	38	40	31	31	19	38	25	11	5	2	–	–	–
Manufacturing	300	40.0	347.00	337.00	278.50– 400.00	1	10	8	23	35	15	30	32	25	28	17	18	13	20	20	3	2	–	–	–	–
Nonmanufacturing	142	39.5	387.00	375.00	326.50– 438.00	–	–	–	1	1	18	9	19	13	12	14	13	6	18	5	8	3	2	–	–	–
Drafters III	120	40.0	305.00	305.00	266.00– 338.00	–	5	–	17	24	9	25	12	5	11	7	4	–	1	–	–	–	–	–	–	–
Manufacturing	94	40.0	292.00	283.00	260.50– 315.00	–	5	–	16	24	7	21	6	3	11	1	–	–	–	–	–	–	–	–	–	–

See footnotes at end of tables.

Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[1]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[1]	Middle range[1]	180 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 and over
Drafters IV	160	39.5	352.50	342.00	315.00– 387.50	–	–	–	–	9	24	9	35	21	15	14	12	7	12	2	–	–	–	–	–	–
Manufacturing	93	40.0	349.50	344.00	322.00– 383.50	–	–	–	–	8	8	5	24	15	6	9	10	5	3	–	–	–	–	–	–	–
Nonmanufacturing	67	39.0	357.00	340.00	297.50– 390.50	–	–	–	–	1	16	4	11	6	9	5	2	2	9	2	–	–	–	–	–	–
Drafters V	135	39.5	440.50	437.00	383.50– 494.50	–	–	–	–	–	–	2	4	12	14	10	15	12	25	23	11	5	2	–	–	–
Manufacturing	86	40.0	437.50	437.00	381.50– 486.00	–	–	–	–	–	–	1	2	7	11	7	8	8	17	20	3	2	–	–	–	–
Electronics technicians	1,281	40.0	405.50	432.00	323.00– 478.00	–	10	17	73	41	75	98	93	79	43	45	56	26	362	163	96	4	–	–	–	–
Manufacturing	942	40.0	378.00	357.00	303.50– 470.00	–	10	17	73	41	75	96	92	75	43	42	45	22	118	152	37	4	–	–	–	–
Electronics technicians II	666	40.0	415.00	470.00	325.00– 478.00	–	–	–	–	32	69	56	23	17	14	29	32	20	321	53	–	–	–	–	–	–
Manufacturing	406	40.0	380.00	377.50	300.00– 470.00	–	–	–	–	32	69	54	22	13	14	27	25	19	79	52	–	–	–	–	–	–
Electronics technicians III	484	40.0	435.50	461.50	349.50– 512.50	–	–	–	–	–	3	33	55	58	29	11	21	3	41	110	96	4	–	–	–	–
Manufacturing	385	40.0	418.50	402.50	343.50– 495.00	–	–	–	–	–	3	33	55	58	29	10	17	–	39	100	37	4	–	–	–	–
Nonmanufacturing	79	38.5	517.50	535.00	520.00– 536.50	–	–	–	–	–	–	–	–	–	–	1	4	3	2	10	59	–	–	–	–	–
Transportation and utilities	79	38.5	517.50	535.00	520.00– 536.50	–	–	–	–	–	–	–	–	–	–	1	4	3	2	10	59	–	–	–	–	–
Registered industrial nurses	70	40.0	389.50	392.50	355.50– 407.50	–	–	–	–	1	–	2	4	12	7	17	18	3	1	4	1	–	–	–	–	–
Manufacturing	54	40.0	390.50	392.50	352.50– 408.00	–	–	–	–	–	–	2	4	10	4	16	11	1	1	4	1	–	–	–	–	–

See footnotes at end of tables.

Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Sex,[3] occupation, and industry division	Number of workers	Average (mean[2]) Weekly hours[1] (standard)	Average (mean[2]) Weekly earnings (in dollars)[1]
Office occupations - men			
Messengers	65	40.0	190.00
Office occupations - women			
Secretaries	2,253	40.0	304.00
Manufacturing	1,366	40.0	305.50
Nonmanufacturing	887	39.5	301.50
Transportation and utilities	337	39.5	350.50
Secretaries I	97	40.0	235.50
Secretaries II	526	40.0	262.00
Manufacturing	250	40.0	265.50
Nonmanufacturing	276	40.0	259.00
Secretaries III	1,052	40.0	304.00
Manufacturing	708	40.0	299.00
Nonmanufacturing	344	39.5	313.50
Transportation and utilities	175	39.5	351.00
Secretaries IV	509	40.0	348.50
Manufacturing	312	40.0	354.00
Nonmanufacturing	197	39.5	339.50
Transportation and utilities	66	40.0	403.50
Secretaries V	69	40.0	391.50
Stenographers	135	39.5	322.00
Manufacturing	72	39.0	313.00
Nonmanufacturing	63	40.0	332.00
Transportation and utilities	63	40.0	332.00
Stenographers I	69	40.0	288.00
Stenographers II	66	39.0	357.50
Typists	344	39.5	222.00
Manufacturing	171	40.0	233.50
Nonmanufacturing	173	39.0	211.00
Typists I	178	39.5	202.00
Nonmanufacturing	113	39.0	197.00
Typists II	166	39.5	243.50
Manufacturing	106	40.0	247.00
Nonmanufacturing	60	39.0	237.50
File clerks	193	39.0	170.50
Nonmanufacturing	176	39.0	168.50
File clerks I	117	38.5	154.00
File clerks II	60	39.5	193.50
Messengers	61	39.0	182.50
Nonmanufacturing	55	39.0	181.50
Switchboard operators	147	40.0	224.00
Nonmanufacturing	109	40.0	209.00
Switchboard operator-receptionists	83	39.5	209.50
Nonmanufacturing	64	39.5	202.00
Order clerks	62	40.0	242.50
Accounting clerks	1,177	40.0	254.00
Nonmanufacturing	776	40.0	246.50
Accounting clerks II	303	40.0	213.50
Manufacturing	54	40.0	238.50
Nonmanufacturing	249	40.0	208.50
Accounting clerks III	529	39.5	261.00
Manufacturing	135	39.5	270.50
Nonmanufacturing	394	39.5	257.50
Accounting clerks IV:			
Nonmanufacturing	115	40.0	301.00
Transportation and utilities	42	40.0	380.50
Payroll clerks	130	40.0	258.50
Manufacturing	57	40.0	278.00
Nonmanufacturing	73	40.0	243.50
Key entry operators	804	40.0	244.00
Manufacturing	473	40.0	245.00
Nonmanufacturing	331	39.5	243.00
Transportation and utilities	77	40.0	311.00
Key entry operators I	480	39.5	225.00
Manufacturing	244	39.5	225.00
Nonmanufacturing	236	39.5	224.50
Transportation and utilities	51	40.0	281.00
Key entry operators II	324	40.0	272.50
Manufacturing	229	40.0	266.00
Nonmanufacturing	95	39.5	289.00
Transportation and utilities	26	39.5	370.50
Professional and technical occupations - men			
Computer systems analysts (business)	476	39.5	558.50
Nonmanufacturing	347	39.0	570.00
Transportation and utilities	306	39.0	564.00
Computer systems analysts (business) I	52	40.0	457.50
Computer systems analysts (business) II	199	39.5	513.00
Nonmanufacturing	157	39.0	523.50
Transportation and utilities	136	39.0	514.50
Computer systems analysts (business) III	225	39.5	622.50
Nonmanufacturing	157	39.0	631.50
Transportation and utilities	137	39.0	628.50
Computer programmers (business): Nonmanufacturing	157	39.5	449.50
Computer programmers (business) II: Nonmanufacturing	111	40.0	447.50
Computer programmers (business) III	94	39.5	495.50
Computer operators	279	39.5	373.50
Nonmanufacturing	166	39.5	387.00
Computer operators II	130	39.5	344.00
Nonmanufacturing	94	39.5	350.00
Transportation and utilities	40	39.0	381.50
Computer operators III	123	40.0	426.00
Nonmanufacturing	81	40.0	444.50
Drafters	325	40.0	377.50
Nonmanufacturing	116	39.5	393.00
Drafters III	80	40.0	315.00
Drafters IV	119	39.5	360.00
Manufacturing	65	40.0	380.00
Nonmanufacturing	54	39.5	380.50
Drafters V	117	39.5	448.50
Manufacturing	74	40.0	447.00
Electronics technicians:			
Electronics technicians II	517	40.0	432.50
Professional and technical occupations - women			
Computer systems analysts (business):			
Nonmanufacturing	135	39.0	533.00
Transportation and utilities	122	39.0	543.50
Computer systems analysts (business) II	114	39.5	481.50
Nonmanufacturing	73	39.0	494.50
Transportation and utilities	66	39.0	497.00
Computer programmers (business): Nonmanufacturing	117	39.0	424.00
Computer programmers (business) II: Nonmanufacturing	89	39.5	428.00
Computer programmers (business) III	63	39.0	477.00
Computer operators	242	40.0	390.00
Computer operators II	136	39.5	370.50
Registered industrial nurses	89	40.0	389.50
Manufacturing	53	40.0	390.50

See footnotes at end of tables.

Table A-15. Hourly earnings of maintenance, toolroom, and powerplant workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[2]	Middle range[3]	Under 6.80	6.80 and under 7.00	7.00 – 7.20	7.20 – 7.40	7.40 – 7.60	7.60 – 7.80	7.80 – 8.00	8.00 – 8.20	8.20 – 8.40	8.40 – 8.80	8.80 – 9.20	9.20 – 9.60	9.60 – 10.00	10.00 – 10.40	10.40 – 10.80	10.80 – 11.20	11.20 – 11.60	11.60 – 12.00	12.00 – 12.40	12.40 – 12.80	12.80 – 13.20	13.20 – 13.60	13.60 and over
Maintenance carpenters	70	10.94	11.27	9.73–11.27	-	-	-	-	-	-	-	-	-	-	2	8	11	1	1	1	34	8	-	-	2	-	2
Maintenance electricians	308	11.44	11.70	10.58–12.15	-	-	-	-	1	-	-	-	-	8	2	22	26	7	14	-	14	128	45	32	-	-	9
Manufacturing	215	11.44	11.83	10.58–12.15	-	-	-	-	1	-	-	-	-	8	2	2	26	6	13	-	11	69	45	32	-	-	-
Maintenance painters	65	10.55	11.03	9.60–11.03	-	-	-	-	-	-	-	-	-	1	11	4	8	1	-	28	-	6	6	-	-	-	-
Maintenance machinists	321	11.50	11.68	11.66–11.83	-	-	-	-	1	-	-	-	4	3	3	15	10	3	7	6	22	218	2	9	13	5	-
Manufacturing	227	11.42	11.75	11.28–11.83	-	-	-	-	1	-	-	-	4	3	3	15	10	3	7	6	22	124	2	9	13	5	-
Maintenance mechanics (machinery)	432	11.31	11.83	10.24–12.15	-	-	-	-	-	-	3	2	-	7	32	36	19	14	33	8	5	71	173	8	6	-	15
Manufacturing	380	11.34	11.83	10.58–12.15	-	-	-	-	-	-	3	2	-	7	7	36	14	14	33	8	4	71	173	8	-	-	-
Nonmanufacturing: Transportation and utilities	27	12.95	13.91	13.00–14.07	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	1	-	-	-	6	-	* 15
Maintenance mechanics (motor vehicles)	355	11.74	11.58	10.77–12.70	-	-	-	-	-	-	-	-	1	1	1	3	18	11	81	20	84	6	14	28	23	19	* * 45
Manufacturing	54	11.25	11.51	11.02–12.07	-	-	-	-	-	-	-	-	1	1	1	3	-	-	-	20	8	6	14	-	-	-	-
Nonmanufacturing	301	11.83	11.58	10.77–13.05	-	-	-	-	-	-	-	-	-	-	-	-	18	11	81	-	76	-	-	28	23	19	45
Transportation and utilities	232	11.75	11.58	10.77–13.25	-	-	-	-	-	-	-	-	-	-	-	-	-	11	81	-	76	-	-	-	-	19	45
Machine-tool operators (toolroom)	64	11.78	11.99	11.17–12.65	-	-	-	-	-	-	-	-	-	-	-	-	5	4	1	7	-	26	-	21	-	-	-
Manufacturing	64	11.78	11.99	11.17–12.65	-	-	-	-	-	-	-	-	-	-	-	-	5	4	1	7	-	26	-	21	-	-	-
Tool and die makers	193	12.14	12.47	11.73–12.64	-	-	-	-	-	-	-	-	-	-	-	1	21	-	5	4	14	10	18	76	29	3	12
Manufacturing	193	12.14	12.47	11.73–12.64	-	-	-	-	-	-	-	-	-	-	-	1	21	-	5	4	14	10	18	76	29	3	12
Stationary engineers	235	11.31	11.51	11.51–11.95	3	-	-	1	1	-	-	1	3	4	5	17	6	11	-	-	75	56	30	15	1	-	6
Manufacturing	139	11.60	11.51	11.51–12.15	-	-	-	-	-	-	-	-	-	-	1	1	5	8	-	-	74	11	22	15	1	-	1
Nonmanufacturing	96	10.89	11.95	9.50–11.95	3	-	-	1	1	-	-	1	3	4	4	16	1	3	-	-	1	45	8	-	-	-	5

* Workers were distributed as follows: 7 at $13.60 to $14.00; 4 at $14.00 to $14.40; and 4 at $14.40 to $14.80.
* * All workers were at $13.60 to $14.00.
Also see footnotes at end of tables.

Table A-16. Hourly earnings of material movement and custodial workers in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean[2]	Median[2]	Middle range[3]	3.40 and under 3.60	3.60 – 3.80	3.80 – 4.00	4.00 – 4.40	4.40 – 4.80	4.80 – 5.20	5.20 – 5.60	5.60 – 6.00	6.00 – 6.40	6.40 – 6.80	6.80 – 7.20	7.20 – 7.60	7.60 – 8.00	8.00 – 8.40	8.40 – 8.80	8.80 – 9.20	9.20 – 9.60	9.60 – 10.00	10.00 – 10.40	10.40 – 10.80	10.80 – 11.60	11.60 – 12.40	12.40 – 13.20
Truckdrivers	1,505	10.69	11.21	10.37–11.68	–	–	–	–	7	18	35	2	30	5	16	9	104	10	29	16	9	41	132	83	294	362	303
Manufacturing	442	9.41	10.37	8.75–10.52	–	–	–	–	7	18	33	–	14	5	–	9	–	7	24	9	–	25	132	83	76	–	–
Nonmanufacturing	1,063	11.23	11.64	11.21–12.74	–	–	–	–	–	–	2	2	16	–	16	–	104	3	5	7	9	16	–	–	218	362	303
Truckdrivers, light truck	92	6.78	5.33	4.97– 8.75	–	–	–	–	7	18	23	–	6	–	–	1	–	–	24	–	–	13	–	–	–	–	–
Manufacturing	88	6.71	5.33	4.97– 8.75	–	–	–	–	7	18	23	–	6	–	–	1	–	–	20	–	–	13	–	–	–	–	–
Truckdrivers, tractor-trailer	791	10.89	11.64	11.20–11.68	–	–	–	–	–	–	10	–	–	–	–	7	104	7	4	4	–	3	–	2	248	349	53
Nonmanufacturing	681	11.04	11.64	11.21–11.68	–	–	–	–	–	–	–	–	–	–	–	–	104	–	–	–	–	3	–	–	172	349	53
Shippers and receivers	167	7.92	7.36	5.34–10.77	–	–	6	3	12	15	13	7	2	16	7	5	8	–	–	–	1	10	17	4	41	–	–
Manufacturing	89	7.27	7.07	5.27– 9.90	–	–	6	–	6	10	10	–	1	10	7	5	4	–	–	–	1	8	17	4	–	–	–
Nonmanufacturing	78	8.67	11.19	5.70–11.19	–	–	–	3	6	5	3	7	1	6	–	–	4	–	–	–	–	2	–	–	41	–	–
Warehousemen	1,034	7.84	7.36	5.62–10.09	–	–	12	10	65	83	45	91	52	114	29	45	18	47	17	20	20	75	115	4	172	–	–
Manufacturing	395	7.78	7.36	6.21– 9.71	–	–	–	–	24	12	4	29	48	57	12	17	10	30	5	8	15	44	82	–	–	–	–
Nonmanufacturing	639	7.87	7.20	5.45–11.15	–	–	12	10	41	71	41	62	6	57	17	28	8	17	12	12	5	31	33	4	172	–	–
Transportation and utilities	162	10.44	11.06	9.76–11.32	–	–	–	–	–	–	–	–	–	1	4	4	4	–	2	1	–	27	33	3	83	–	–
Order fillers	962	10.72	11.15	10.72–11.15	–	–	–	–	–	–	–	–	–	–	–	–	38	–	22	20	5	21	107	156	593	–	–
Material handling laborers	500	8.00	9.28	5.25–10.72	4	11	22	20	35	24	58	19	24	8	–	–	1	5	10	8	7	1	13	230	–	–	–
Manufacturing	162	5.97	5.41	5.20– 6.07	–	–	–	–	24	16	54	14	24	8	–	–	–	1	6	1	–	1	13	–	–	–	–
Forklift operators	493	9.85	10.20	9.40–10.72	–	–	–	–	–	8	–	–	1	38	10	4	4	3	11	24	33	11	141	109	96	–	–
Manufacturing	319	9.41	10.20	8.91–10.20	–	–	–	–	–	8	–	–	–	37	9	4	4	3	11	24	–	11	141	67	–	–	–
Nonmanufacturing	174	10.66	11.19	10.72–11.19	–	–	–	–	–	–	–	–	1	1	1	–	–	–	–	–	33	–	–	42	96	–	–
Guards	473	7.06	6.68	4.78– 9.62	–	1	2	34	83	50	19	17	7	51	6	3	13	11	14	9	22	116	–	–	15	–	–
Manufacturing	299	8.03	6.70	6.68– 9.82	–	–	–	–	20	26	4	8	4	47	6	3	9	11	14	9	22	116	–	–	–	–	–
Nonmanufacturing	174	5.39	4.67	4.61– 5.33	–	1	2	34	63	24	15	9	3	4	–	–	4	–	–	–	–	–	–	–	15	–	–
Guards I	201	5.52	5.00	4.61– 6.68	–	1	2	16	72	20	14	12	5	34	6	3	7	4	2	2	1	–	–	–	–	–	–
Manufacturing	89	6.31	6.68	5.25– 6.68	–	–	–	–	20	2	4	8	4	30	6	3	3	4	2	2	1	–	–	–	–	–	–
Nonmanufacturing	112	4.90	4.61	4.61– 5.04	–	1	2	16	52	18	10	4	1	4	–	–	4	–	–	–	–	–	–	–	–	–	–
Guards II	272	8.19	9.52	5.86– 9.82	–	–	–	18	11	30	5	5	2	17	–	–	6	7	12	7	21	116	–	–	15	–	–
Janitors, porters, and cleaners	975	6.94	7.16	4.45– 9.40	69	47	9	63	126	28	7	22	40	48	31	67	6	70	6	52	195	11	78	–	–	–	–
Manufacturing	449	7.22	6.94	4.75– 9.40	–	–	–	24	94	8	1	5	37	30	30	19	3	63	1	8	50	1	75	–	–	–	–
Nonmanufacturing	526	6.69	7.28	4.00– 9.59	69	47	9	39	32	20	6	17	3	18	1	48	3	7	5	44	145	10	3	–	–	–	–
Transportation and utilities	107	7.85	7.56	7.56– 8.83	–	–	–	–	–	–	–	7	–	12	–	46	3	7	–	19	–	10	3	–	–	–	–

See footnotes at end of tables.

Table A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement and custodial workers by sex in establishments employing 500 workers or more in Denver-Boulder, Colo., December 1981

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[3]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	70	10.94
Maintenance electricians	307	11.44
Manufacturing	214	11.44
Maintenance painters	65	10.55
Maintenance machinists	320	11.50
Manufacturing	226	11.43
Maintenance mechanics (machinery)	427	11.33
Manufacturing	380	11.34
Maintenance mechanics (motor vehicles)	353	11.75
Manufacturing	54	11.25
Nonmanufacturing	299	11.84
Transportation and utilities	230	11.76
Machine-tool operators (toolroom)	62	11.85
Manufacturing	62	11.85
Tool and die makers	193	12.14
Manufacturing	193	12.14
Stationary engineers	231	11.30
Manufacturing	139	11.60
Nonmanufacturing	92	10.84
Material movement and custodial occupations - men		
Truckdrivers	1,469	10.69
Manufacturing	432	9.48
Nonmanufacturing	1,037	11.20
Truckdrivers, light truck	92	6.78
Manufacturing	88	6.71
Truckdrivers, tractor-trailer	791	10.89
Nonmanufacturing	681	11.04
Shippers and receivers	137	7.99
Nonmanufacturing	75	8.67
Warehousemen	779	8.06
Nonmanufacturing	535	8.04
Transportation and utilities	146	10.58
Order fillers	841	10.73
Forklift operators	482	9.97
Manufacturing	289	9.55
Nonmanufacturing	173	10.66
Guards	431	7.01
Manufacturing	267	7.98
Nonmanufacturing	164	5.44
Guards I	181	5.51
Manufacturing	79	6.26
Nonmanufacturing	102	4.93
Guards II	250	8.10
Janitors, porters, and cleaners	791	6.78
Manufacturing	373	6.99
Nonmanufacturing	418	6.60
Transportation and utilities	86	7.85
Material movement and custodial occupations - women		
Janitors, porters, and cleaners	170	7.76
Manufacturing	76	8.36
Nonmanufacturing	94	7.29

See footnotes at end of tables.

Footnotes

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.

[2] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—half of the workers receive the same or more and half receive the same or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same or less than the lower of these rates and one-fourth earn the same or more than the higher rate.

[3] Earnings data relate only to workers whose sex identification was provided by the establishment.

[4] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[5] Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

[6] Data do not meet publication criteria or data not available.

Appendix A. Scope and Method of Survey

In each of the 71 areas[1] currently surveyed, the Bureau obtains wages and related benefits data from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Government operations and the construction and extractive industries are excluded. Small establishments—generally those with fewer than 50 employees—are excluded because they have few incumbents in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

Bureau field representatives obtain data by personal visits at 3-year intervals. In each of the two intervening years, information on employment and occupational earnings only is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained for the following two annual surveys. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification of all establishments within the scope of an individual area survey by industry and number of employees. From this stratified universe a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. An alternate of the same original probability is chosen in the same industry-size classification if data are not available from the original sample member. If no suitable substitute is available, additional weight is assigned to a sample member that is similar to the missing unit.

Occupations and earnings

Occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance, toolroom, and powerplant; and (4) material movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B.

Unless otherwise indicated, the earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is possibility of disclosure of individual establishment data. Separate men's and women's earnings data are not presented when the number of workers not identified by sex is 20 percent or more of the men or women identified in an occupation. Earnings data not shown separately for industry divisions are included in data for all industries combined. Likewise, for occupations with more than one level, data are included in the overall classification when a subclassification is not shown or information to subclassify is not available.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Nonproduction bonuses are excluded, but cost-of-living allowances and incentive bonuses are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Most A-series tables provide distributions of workers by earnings; changes in the size of earnings intervals are indicated by heavy vertical lines.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being replaced by new workers at lower rates. Such shifts in employment could decrease an occupational average even though most establishments in an area increase wages during the year. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates

for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the trend jobs in both the current and previous year (matched establishments). The data are adjusted to remove the effects on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

Office clerical

Secretaries
Stenographers, I and II
Typists, I and II
File clerks, I, II, and III
Messengers
Switchboard operators
Order clerks, I and II
Accounting clerks, I, II, III, and IV
Payroll clerks
Key entry operators, I and II

Electronic data processing

Computer systems analysts, I, II, and III
Computer programmers, I, II, and III
Computer operators, I, II, and III

Industrial nurses

Registered industrial nurses

Skilled maintenance

Carpenters
Electricians
Painters
Machinists
Mechanics (machinery)
Mechanics (motor vehicle)
Pipefitters
Tool and die makers

Unskilled plant

Janitors, porters, and cleaners
Material handling laborers

Percent changes for individual areas in the program are computed as follows:

1. Average earnings are computed for each occupation for the 2 years being compared. The averages are derived from earnings in those establishments which are in the survey both years; it is assumed that employment remains unchanged.

2. Each occupation is assigned a weight based on its proportionate employment in the occupational group.

3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) are multiplied by its weight. The products are totaled to obtain a group average.

4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

The index is computed by adding 100 to the most recent percent increase, multiplying the total by the previous year's index number, and dividing the product by 100 to obtain the current index value.

For a more detailed description of the method used to compute these wage trends, see "Improving Area Wage Survey Indexes," *Monthly Labor Review*, January 1973, pp. 52-57.

Pay relationships in establishments

Tables A-8 through A-11 compare average pay of occupations in individual establishments. These comparisons, expressed as pay relatives (pay for one of the occupations equals 100), yield different results than comparisons of overall survey averages, such as those shown in tables A-1 through A-6. The latter reflect differences in contributions to the survey averages by establishments with disparate pay levels; the pay relative comparisons are not affected by such differences.

The methods of computing and presenting pay relatives have changed since the last survey in this area. The following procedures are now used to compute relatives in tables A-8 through A-11:

1. Establishments employing workers in both of the paired occupations were identified.
2. Pay levels (averages) for the two occupations were weighted by the combined employment of both jobs to reflect each establishment's contribution to the totals used in this comparison.
3. The weighted pay levels of the two jobs were summed separately; each total was divided by the other and the quotients multiplied by 100 to produce the two pay relatives shown for each job pairing.

Establishment practices and supplementary wage provisions

Tabulations on selected establishment practices and supplementary wage provisions (B-series tables) are not presented in this bulletin. Information for these tabulations is collected at 3-year intervals. These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; and health, insurance, and pension plans are presented (in the B-series tables) in previous bulletins for this area.

[1] Includes 70 areas surveyed under the Bureau's regular program plus Poughkeepsie-Kingston-Newburgh, N.Y., which is surveyed under contract. In addition, the Bureau conducts more limited area studies in approximately 100 areas at the request of the Employment Standards Administration of the U.S. Department of Labor.

Appendix table 1. Establishments and workers within scope of survey and number studied in Denver-Boulder, Colo.,[1] December 1981

Industry division[2]	Minimum employment in establishments in scope of survey	Number of establishments		Workers in establishments		
		Within scope of survey[3]	Studied	Within scope of survey[3]		Studied
				Number	Percent	
All establishments						
All divisions	-	1,528	220	344,961	100	181,724
Manufacturing	50	365	62	108,647	31	65,227
Nonmanufacturing	-	1,163	158	236,314	69	96,497
Transportation, communication, and other public utilities[4]	50	97	33	48,342	14	41,722
Wholesale trade[4]	50	223	23	26,469	8	5,307
Retail trade[4]	50	373	32	83,179	24	32,466
Finance, insurance, and real estate[4]	50	193	23	31,786	9	7,558
Services[4 5]	50	277	47	44,538	13	9,444
Large establishments						
All divisions	-	102	58	185,751	100	135,294
Manufacturing	500	36	23	67,863	41	58,447
Nonmanufacturing	-	66	35	97,888	59	76,847
Transportation, communication, and other public utilities[4]	500	11	11	38,084	23	38,084
Wholesale trade[4]	500	3	2	2,741	2	1,941
Retail trade[4]	500	32	14	42,172	25	29,829
Finance, insurance, and real estate[4]	500	13	5	10,126	6	4,848
Services[4 5]	500	7	3	4,765	3	2,145

[1] The Denver-Boulder, Colo. Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, and Jefferson Counties. The "workers within scope of survey" estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of nonmanufacturing companies are considered as one establishment when located within the same industry division.

[4] Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

[5] Abbreviated to "transportation and utilities" in the A-series tables. Formerly referred to as "public utilities". Taxicabs and services incidental to water transportation are excluded.

[6] Separate data for this division are not presented in the A-series tables, but the division is represented in the 'all industries' and "nonmanufacturing" estimates.

[7] Hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

Office

SECRETARY

Assigned as a personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

a. Positions which do not meet the "personal" secretary concept described above;

b. Stenographers not fully trained in secretarial-type duties;

c. Stenographers serving as office assistants to a group of professional, technical, or managerial persons;

d. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., Administrative Assistant, or Executive Assistant;

e. Positions which do not fit any of the situations listed in the sections below titled "Level of Supervisor," e.g., secretary to the president of a company that employs, in all, over 5,000 persons;

f. Trainees.

Classification by level. Secretary jobs which meet the required characteristics are matched at one of five levels according to (a) the level of the secretary's supervisor within the company's organizational structure and, (b) the level of the secretary's responsibility. The tabulation following the explanations of these two factors indicates the level of the secretary for each combination of the factors.

Level of Secretary's Supervisor (LS)

LS-1

a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or

b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

LS-2

a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or
b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

LS-3

a. Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or
b. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or
c. Secretary to the head (immediately below the officer level) over either a major corporatewide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or
d. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, over 5,000 persons; or
e. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

LS-4

a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or
b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or
c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

NOTE: The term "corporate officer" used in the above LS definition refers to those officials who have a significant corporatewide policy-making role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the definition.

Level of Secretary's Responsibility(LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at LR-1 or LR-2 described below according to their level of responsibility.

LR-1

Performs varied secretarial duties including or comparable to most of the following:

a. Answers telephones, greets personal callers, and opens incoming mail.
b. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
c. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to ensure procedural and typographical accuracy.
d. Maintains supervisor's calendar and makes appointments as instructed.
e. Types, takes and transcribes dictation, and files.

LR-2

Performs duties described under LR-1 and, *in addition* performs tasks requiring greater judgment, initiative, and knowledge of office functions including or comparable to most of the following:

a. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
b. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
c. Compiles or assists in compiling periodic reports on the basis of general instructions.
d. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation, and files.)

The following tabulation shows the level of the secretary for each LS and LR combination:

	LR-1	*LR-2*
LS-1	I	II
LS-2	II	III
LS-3	III	IV
LS-4	IV	V

STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings (if primary duty is transcribing from recordings, see Transcribing-Machine Typist). *NOTE*: This job is distinguished from that of a secretary in that a secretary normally works in a confidential relationship with only one manager or executive and performs more responsible and discretionary tasks as described in the secretary job definition.

Stenographer I

Dictation involves a normal routine vocabulary. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Dictation involves a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also set up and maintain files, keep records, etc., *OR*

Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I, as evidenced by the following: Work requires a high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedure and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; and answering routine questions, etc.

TRANSCRIBING-MACHINE TYPIST

Primary duty is to type copy of voice recorded dictation which does *not* involve varied technical or specialized vocabulary such as that used in legal briefs or reports on scientific research. May also type from written copy. May maintain files, keep simple records, or perform other relatively routine clerical tasks. (See Stenographer definition for workers involved with shorthand dictation.)

TYPIST

Uses a typewriter to make copies of various materials or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Typist I

Performs *one or more of the following:* Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

FILE CLERK

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

MESSENGER

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening and distributing mail, and other minor clerical work. Exclude positions that require operation of a motor vehicle as a significant duty.

SWITCHBOARD OPERATOR

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, *may* also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

ORDER CLERK

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgement of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. *Exclude workers paid on a commission basis or whose duties include any of the following:* Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Order Clerk I

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

Order Clerk II

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

ACCOUNTING CLERK

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV require a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

PAYROLL CLERK

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following*: Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting

errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

KEY ENTRY OPERATOR

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

Professional and Technical

COMPUTER SYSTEMS ANALYST, BUSINESS

Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifications needed to enable programmers to prepare required digital computer programs. Work involves *most of the following*: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

For wage study purposes, systems analysts are classified as follows:

Computer Systems Analyst I

Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programmers from information developed by the higher level analyst.

Computer Systems Analyst II

Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example, develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. *OR*

Works on a segment of a complex data processing scheme or system, as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

Computer Systems Analyst III

Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records and appropriate follow-up actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

May provide functional direction to lower level systems analysts who are assigned to assist.

COMPUTER PROGRAMMER, BUSINESS

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves *most of the following*: Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter involved to analyze charts and diagrams of the problem to be programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of program development and revisions. (NOTE:

Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

Computer Programmer I

Makes practical applications of programming practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

Computer Programmer II

Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. *OR*

Works on complex programs (as described for level III) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks under fairly close direction.

May guide or instruct lower level programmers.

Computer Programmer III

Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and diverse data elements. A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

May provide functional direction to lower level programmers who are assigned to assist.

COMPUTER OPERATOR

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing (processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

a. Studies operating instructions to determine equipment setup needed.
b. Loads equipment with required items (tapes, cards, disks, paper, etc.).
c. Switches necessary auxiliary equipment into system.
d. Starts and operates computer.
e. Responds to operating and computer output instructions.
f. Reviews error messages and makes corrections during operation *or* refers problems.
g. Maintains operating record.

May test-run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operators, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operate remote terminals.

For wage study purposes, computer operators are classified as follows:

Computer Operator I

Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

Computer Operator II

In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

Computer Operator III

In addition to work assignments described for Computer operator II (see above) the work of Computer operator III involves at least one of the following:

a. Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans.
b. Tests new programs, applications, and procedures.

c. Advises programmers and subject-matter experts on setup techniques.
d. Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

PERIPHERAL EQUIPMENT OPERATOR

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy.
b. Labeling tape reels, disks, or card decks.
c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives.
d. Setting controls which regulate operation of the equipment.
e. Observing panel lights for warnings and error indications and taking appropriate action.
f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns; inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
b. Illustrating work requiring artistic ability;
c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
e. Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions.

Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts or equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

ELECTRONICS TECHNICIAN

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

Electronics Technician I

Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

Electronics Technician II

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instructions, usually less complex than those used by the level III technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

Electronics Technician III

Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

REGISTERED INDUSTRIAL NURSE

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve a *combination of the following*: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

Maintenance, Toolroom, and Powerplant

MAINTENANCE CARPENTER

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves *most of the following*: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE ELECTRICIAN

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves *most of the following*: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE PAINTER

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work *involves the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MACHINIST

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MECHANIC (MACHINERY)

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose *primary duties* involve setting up or adjusting machines.

MAINTENANCE MECHANIC (MOTOR VEHICLE)

Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work involves *most of the following*: Examining automotive equipment to diagnose source of trouble; disassembling equipment and performing repairs that involve the use of such handtools as wrenches, gauges, drills, or specialized equipment in disassembling or fitting parts; replacing broken or defective parts from stock; grinding and adjusting valves; reassembling and installing the various assemblies in the vehicle and making necessary adjustments; and aligning wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the motor vehicle maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles in automobile repair shops.

MAINTENANCE PIPEFITTER

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

MAINTENANCE SHEET-METAL WORKER

Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves *most of the following*: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal working machines; using a variety of handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheet-metal articles as required. In general, the work of the maintenance sheet-metal worker requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MILLWRIGHT

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves *most of the following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and

experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE TRADES HELPER

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR (TOOLROOM)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does *not* include machine-tool operators (toolroom) employed in tool and die jobbing shops.

TOOL AND DIE MAKER

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinkers).

STATIONARY ENGINEER

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; and workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

BOILER TENDER

Tends one or more boilers to produce steam or high-temperature water for use in an establishment. Fires boiler. Observes and interprets readings on gauges, meters, and charts which register various aspects of boiler operation. Adjusts controls to insure safe and efficient boiler operation and to meet demands for steam or high-temperature water. May also do one or more of the following: Maintain a log in which various aspects of boiler operation are recorded; clean, oil, make minor repairs or assist in repairs to boilerroom equipment; and, following prescribed methods, treat boiler water with chemicals and analyze boiler water for such things as acidity, causticity, and alkalinity.

The classification excludes workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

Material Movement and Custodial

TRUCKDRIVER

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

Truckdriver, light truck
(straight truck, under 1 1/2 tons, usually 4 wheels)
Truckdriver, medium truck
(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)
Truckdriver, heavy truck
(straight truck, over 4 tons, usually 10 wheels)
Truckdriver, tractor-trailer

SHIPPER AND RECEIVER

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

Shippers typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e.g., manifests, bills of lading.

Receivers typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

Shipper
Receiver
Shipper and receiver

WAREHOUSEMAN

As directed, performs a *variety* of *warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and receiver and Shipping packer), order filling (see Order filler), or operating power trucks (see Power-truck operator).

ORDER FILLER

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

SHIPPING PACKER

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and *may involve one or more of the following*: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. *Packers who also make wooden boxes or crates are excluded.*

MATERIAL HANDLING LABORER

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve *one or more of the following*: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. *Longshore workers, who load and unload ships, are excluded.*

POWER-TRUCK OPERATOR

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

Forklift operator
Power-truck operator (other than forklift)

GUARD

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

Guard I

Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

Guard II

Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

JANITOR, PORTER, OR CLEANER

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

Appendix C.
Job Conversion Table

Beginning in 1981, multilevel jobs are identified by numeric instead of alphabetic designations. A conversion table for the affected occupations follows:

Occupation	Numeric designation (currently used)	Alphabetic designation (previously used)
Secretary	I	E
	II	D
	III	C
	IV	B
	V	A
Stenographer	I	General
	II	Senior
Typist	I	B
	II	A
File clerk	I	C
	II	B
	III	A
Order clerk	I	B
	II	A
Accounting clerk	I	D
	II	C
	III	B
	IV	A
Key entry operator	I	B
	II	A
Computer systems analyst (business)	I	C
	II	B
	III	A
Computer programmer (business)	I	C
	II	B
	III	A
Computer operator	I	C
	II	B
	III	A
Drafter	I	E
	II	D
	III	C
	IV	B
	V	A
Electronics technician	I	C
	II	B
	III	A
Guard	I	B
	II	A

Area Wage Survey Summaries

The following areas are surveyed periodically for use in administering the Service Contract Act of 1965. Survey results are published in summaries which are available, at no cost, while supplies last from any of the BLS regional offices shown on the back cover.

Alaska (statewide)
Albany, Ga.
Albuquerque, N. Mex.
Alexandria-Leesville, La.
Alpena-Standish-Tawas City, Mich.
Ann Arbor, Mich.
Antelope Valley, Calif.
Asheville, N.C.
Atlantic City, N.J.
Augusta, Ga.-S.C.
Austin, Tex.
Bakersfield, Calif.
Baton Rouge, La.
Battle Creek, Mich.
Beaumont-Port Arthur-Orange and Lake Charles, Tex.-La.
Biloxi-Gulfport and Pascagoula-Moss Point, Miss.
Binghamton, N.Y.
Birmingham, Ala.
Bloomington-Vincennes, Ind.
Bremerton-Shelton, Wash.
Brunswick, Ga.
Cedar Rapids, Iowa
Champaign-Urbana-Rantoul, Ill.
Charleston-North Charleston-Walterboro, S.C.
Charlotte-Gastonia, N.C.
Cheyenne, Wyo.
Clarksville-Hopkinsville, Tenn.-Ky.
Colorado Springs, Colo.
Columbia-Sumter, S.C.
Columbus, Ga.-Ala.
Columbus, Miss.
Connecticut (statewide)
Decatur, Ill.
Des Moines, Iowa
Dothan, Ala.
Duluth-Superior, Minn.-Wis.
El Paso-Alamogordo-Las Cruces, Tex.-N. Mex.
Eugene-Springfield-Medford, Oreg.
Fayetteville, N.C.
Fort Lauderdale-Hollywood and West Palm Beach-Boca Raton, Fla.
Fort Smith, Ark.-Okla.
Fort Wayne, Ind.
Frederick-Hagerstown-Chambersburg, Md.-Pa.
Gadsden and Anniston, Ala.
Goldsboro, N.C.
Grand Island-Hastings, Nebr.
Guam, Territory of
Harrisburg-Lebanon, Pa.
Knoxville, Tenn.
La Crosse-Sparta, Wis.
Laredo, Tex.
Las Vegas-Tonopah, Nev.
Lexington-Fayette, Ky.
Lima, Ohio
Little Rock-North Little Rock, Ark.
Logansport-Peru, Ind.
Lorain-Elyria, Ohio
Lower Eastern Shore, Md.-Va.-Del.
Macon, Ga.
Madison, Wis.
Maine (statewide)
Mansfield, Ohio
McAllen-Pharr-Edinburg and Brownsville-Harlingen- San Benito, Tex.
Meridian, Miss.
Middlesex, Monmouth, and Ocean Counties, N.J.
Mobile-Pensacola-Panama City, Ala.-Fla.
Montana (statewide)
Montgomery, Ala.
Nashville-Davidson, Tenn.
New Bern-Jacksonville, N.C.
New Hampshire (statewide)
North Dakota (statewide)
Northern New York
Northwest Texas
Orlando, Fla.
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Peoria, Ill.
Phoenix, Ariz.
Pine Bluff, Ark.
Portsmouth-Chillicothe-Gallipolis, Ohio
Pueblo, Colo.
Puerto Rico
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Area Wage Surveys

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Area	Bulletin number and price*	
Albany-Schenectady-Troy, N.Y., Sept. 1981	3010-49	$2.50
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Baltimore, Md., Aug. 1981[1]	3010-39	$3.00
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[1] Data on establishment practices and supplementary wage provisions are also presented.

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